



This is a digital copy of a book that was preserved for generations on library shelves before it was carefully scanned by Google as part of a project to make the world's books discoverable online.

It has survived long enough for the copyright to expire and the book to enter the public domain. A public domain book is one that was never subject to copyright or whose legal copyright term has expired. Whether a book is in the public domain may vary country to country. Public domain books are our gateways to the past, representing a wealth of history, culture and knowledge that's often difficult to discover.

Marks, notations and other marginalia present in the original volume will appear in this file - a reminder of this book's long journey from the publisher to a library and finally to you.

Usage guidelines

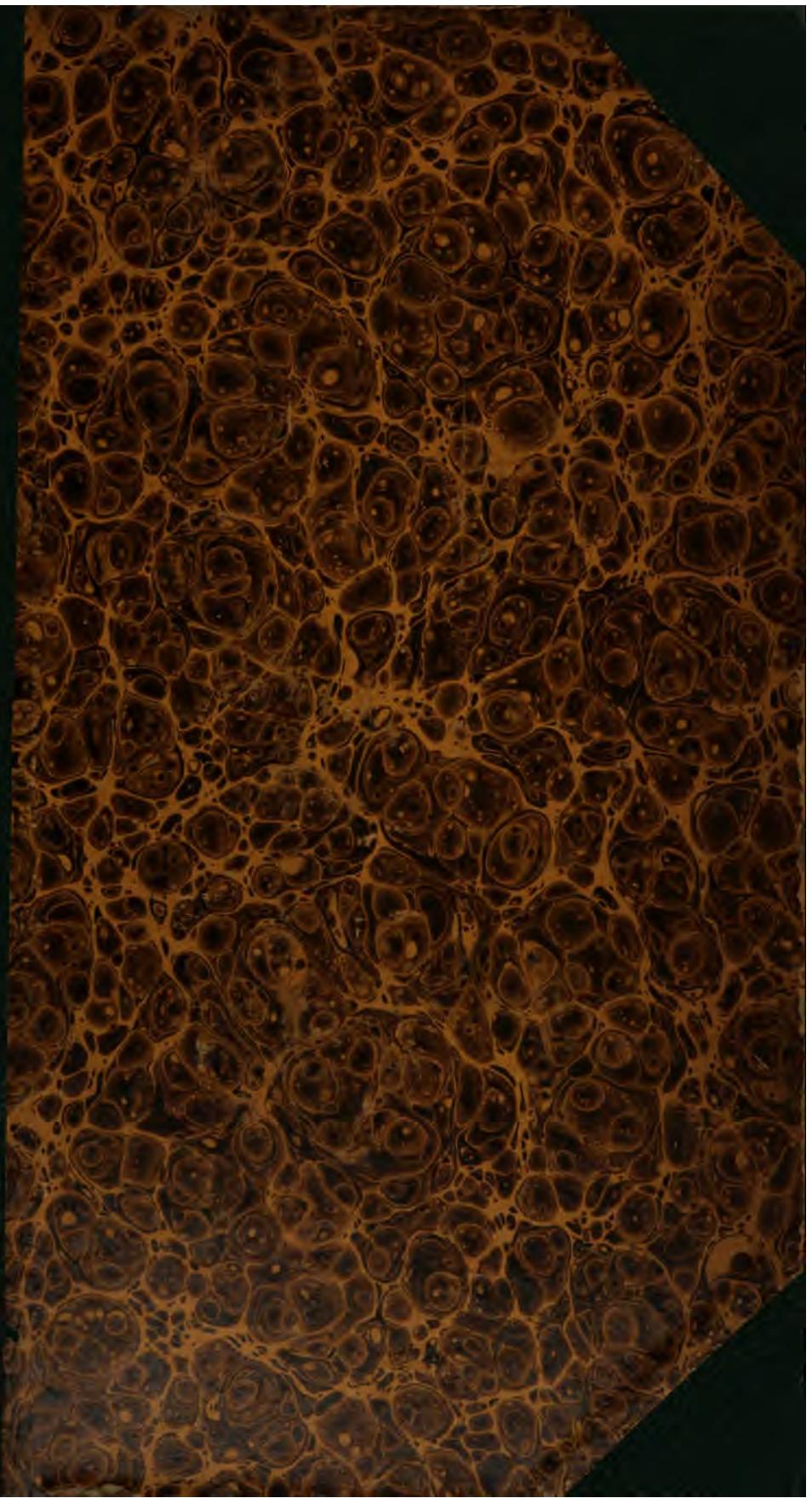
Google is proud to partner with libraries to digitize public domain materials and make them widely accessible. Public domain books belong to the public and we are merely their custodians. Nevertheless, this work is expensive, so in order to keep providing this resource, we have taken steps to prevent abuse by commercial parties, including placing technical restrictions on automated querying.

We also ask that you:

- + *Make non-commercial use of the files* We designed Google Book Search for use by individuals, and we request that you use these files for personal, non-commercial purposes.
- + *Refrain from automated querying* Do not send automated queries of any sort to Google's system: If you are conducting research on machine translation, optical character recognition or other areas where access to a large amount of text is helpful, please contact us. We encourage the use of public domain materials for these purposes and may be able to help.
- + *Maintain attribution* The Google "watermark" you see on each file is essential for informing people about this project and helping them find additional materials through Google Book Search. Please do not remove it.
- + *Keep it legal* Whatever your use, remember that you are responsible for ensuring that what you are doing is legal. Do not assume that just because we believe a book is in the public domain for users in the United States, that the work is also in the public domain for users in other countries. Whether a book is still in copyright varies from country to country, and we can't offer guidance on whether any specific use of any specific book is allowed. Please do not assume that a book's appearance in Google Book Search means it can be used in any manner anywhere in the world. Copyright infringement liability can be quite severe.

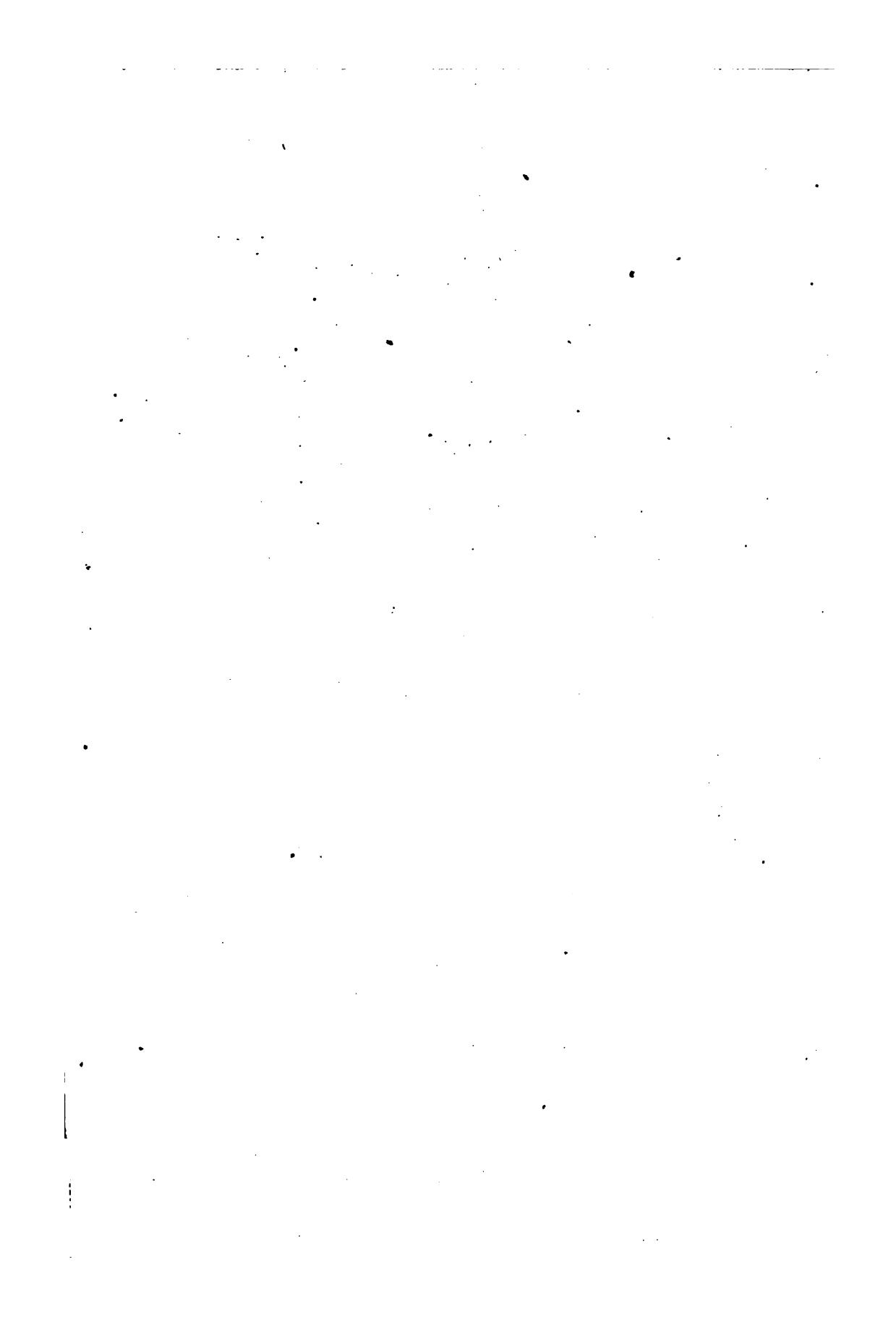
About Google Book Search

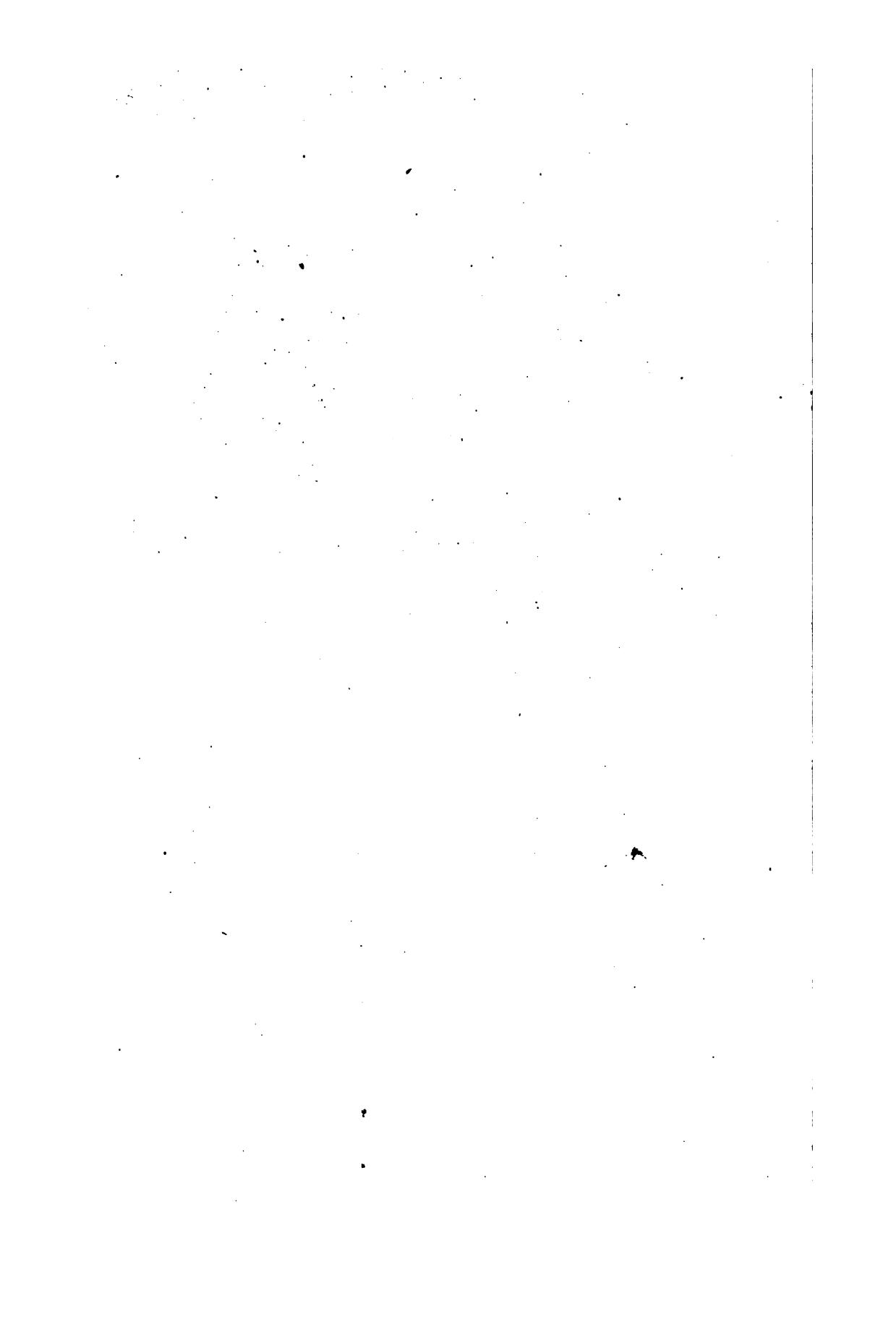
Google's mission is to organize the world's information and to make it universally accessible and useful. Google Book Search helps readers discover the world's books while helping authors and publishers reach new audiences. You can search through the full text of this book on the web at <http://books.google.com/>

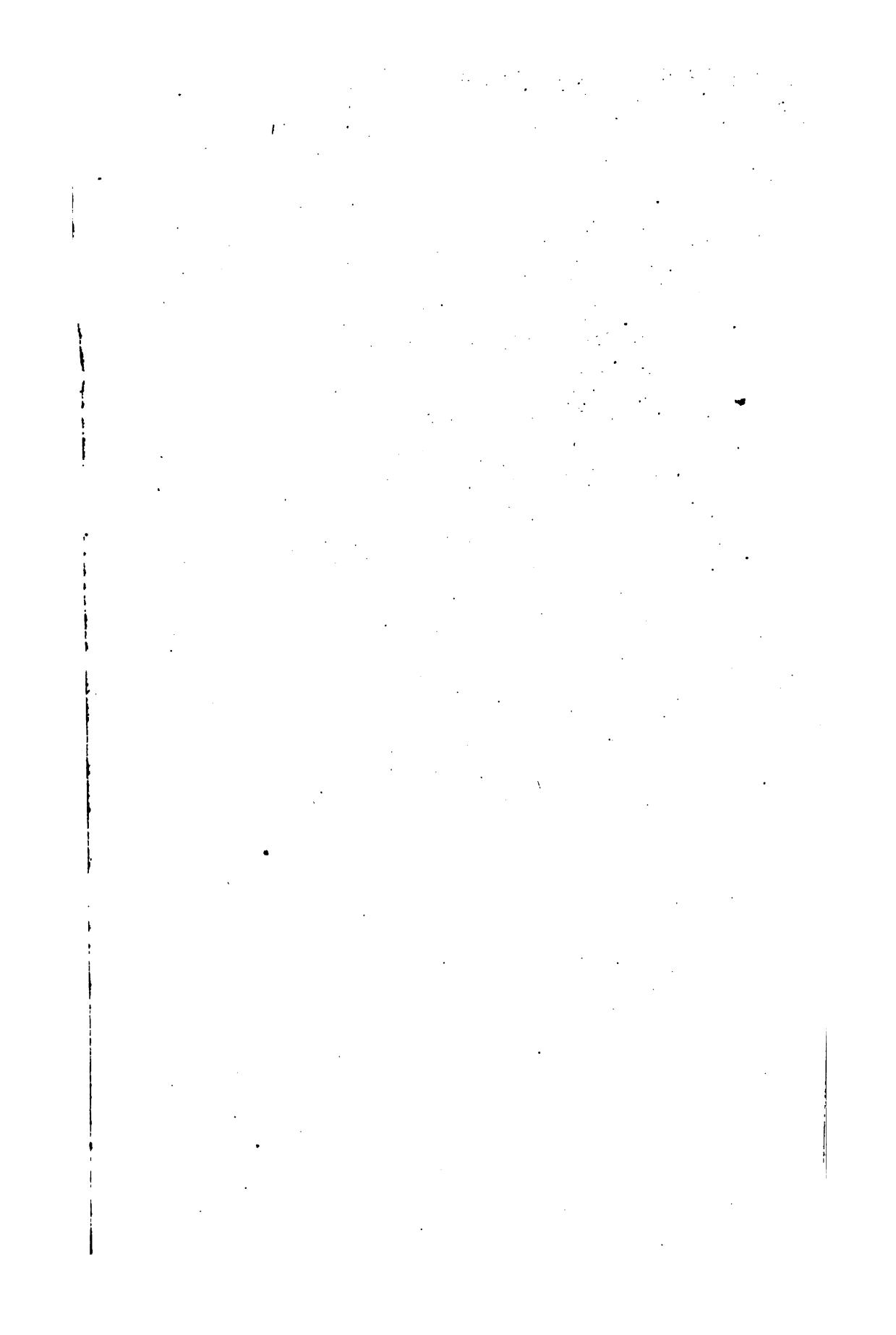


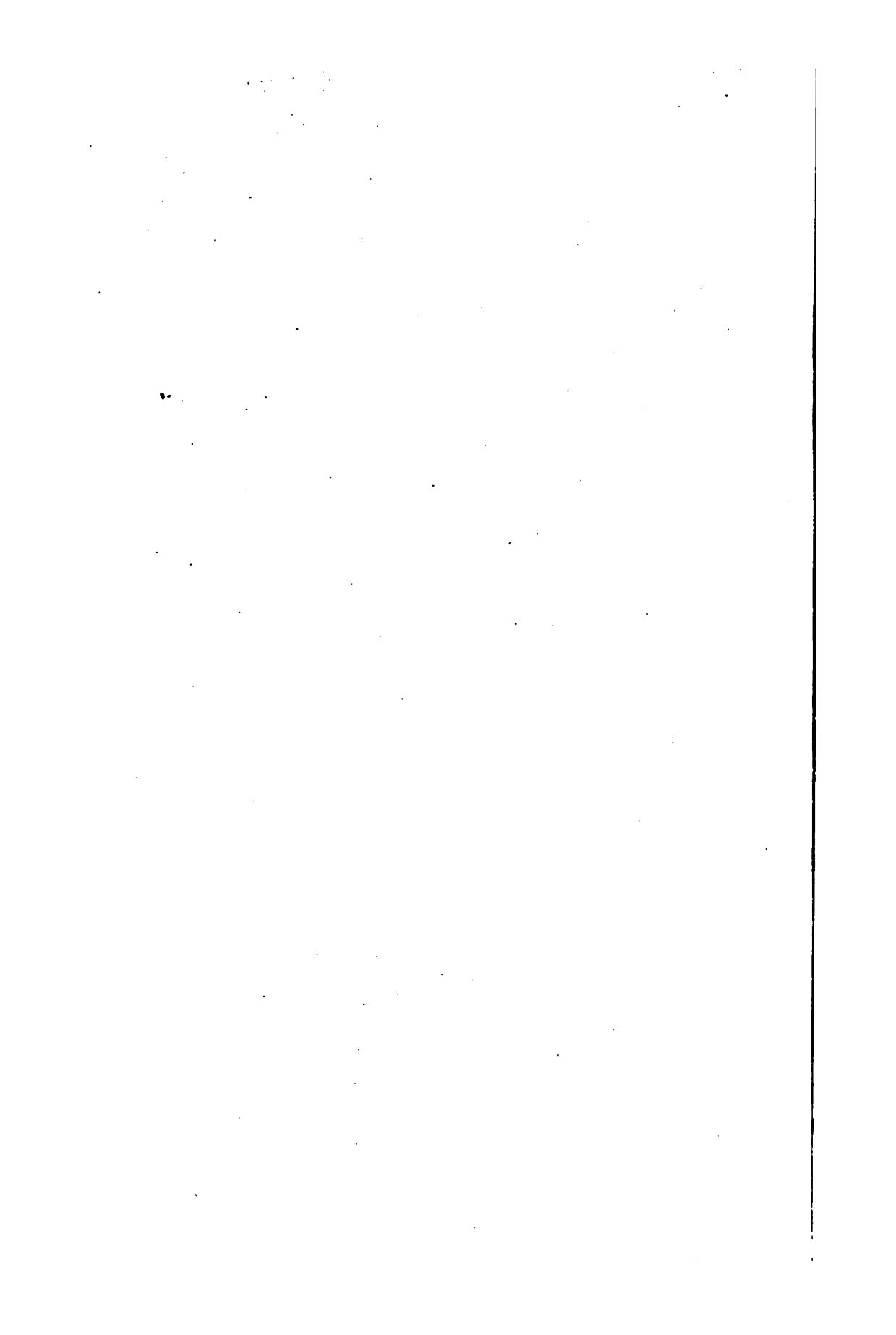
ETB











3

THE HOSPITAL GAZETTE

AND

ARCHIVES OF CLINICAL SURGERY,

A SEMI-MONTHLY JOURNAL OF MEDICINE AND SURGERY.

EDITED BY

EDWARD J. BIRMINGHAM, M. D.,

SURGEON TO THE GOOD SAMARITAN HOSPITAL FOR DISEASES OF THE RECTUM, AND TO
THE OUT-PATIENT DEPARTMENT OF BELLEVUE HOSPITAL, PHYSICIAN TO THE
CHAPIN HOME, LECTURER ON DISEASES OF THE RECTUM IN THE WOMAN'S
MEDICAL COLLEGE, FELLOW OF THE NEW YORK ACADEMY OF MEDICINE,
MEMBER OF THE MEDICAL SOCIETY OF THE COUNTY OF NEW YORK,

AND

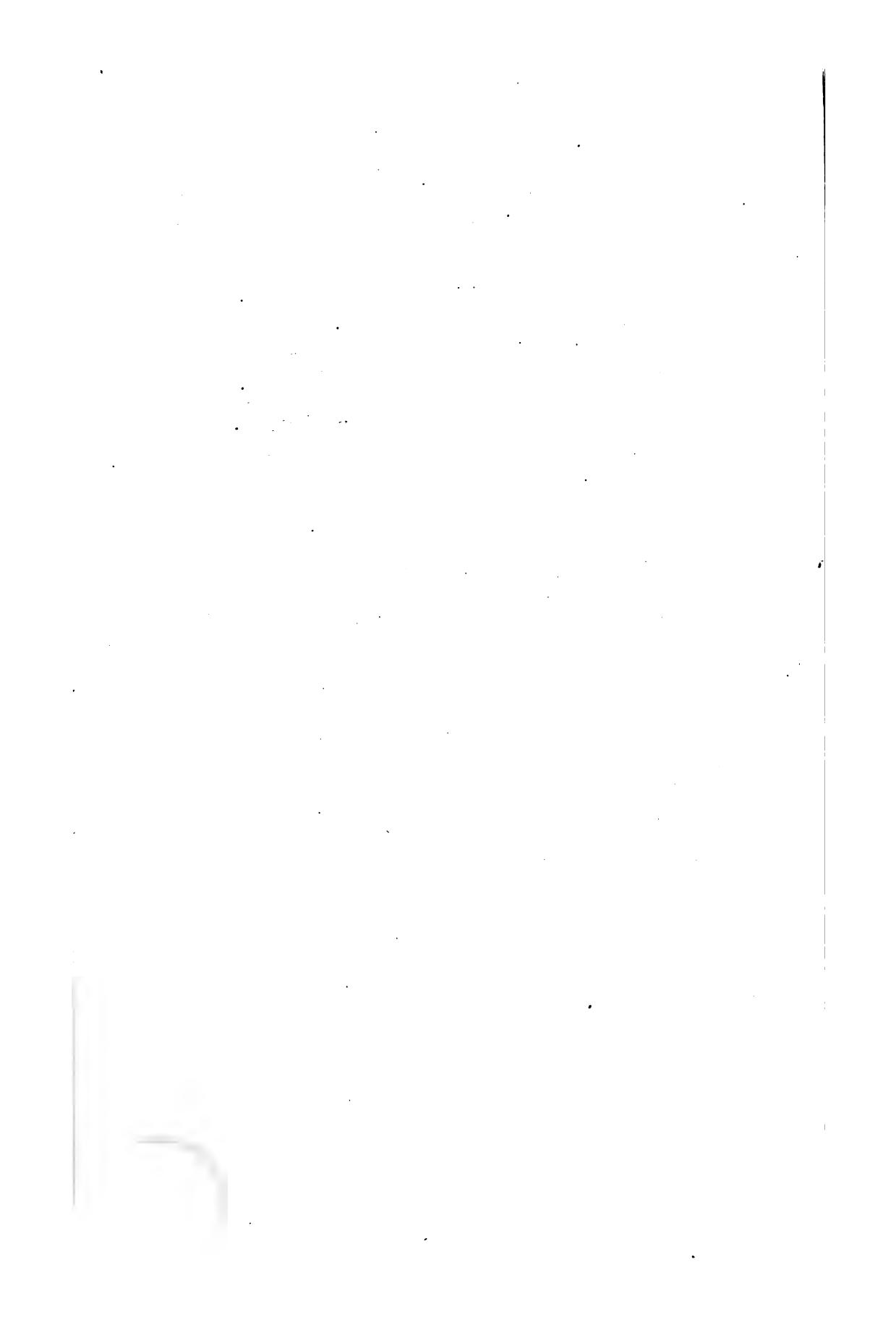
FREDERICK A. LYONS, A. M., M. D.,

LECTURER ON MATERIA MEDICA, THERAPEUTICS AND CHEMISTRY, IN THE AMERICAN
VETERINARY COLLEGE.

VOLUME II, 1877.

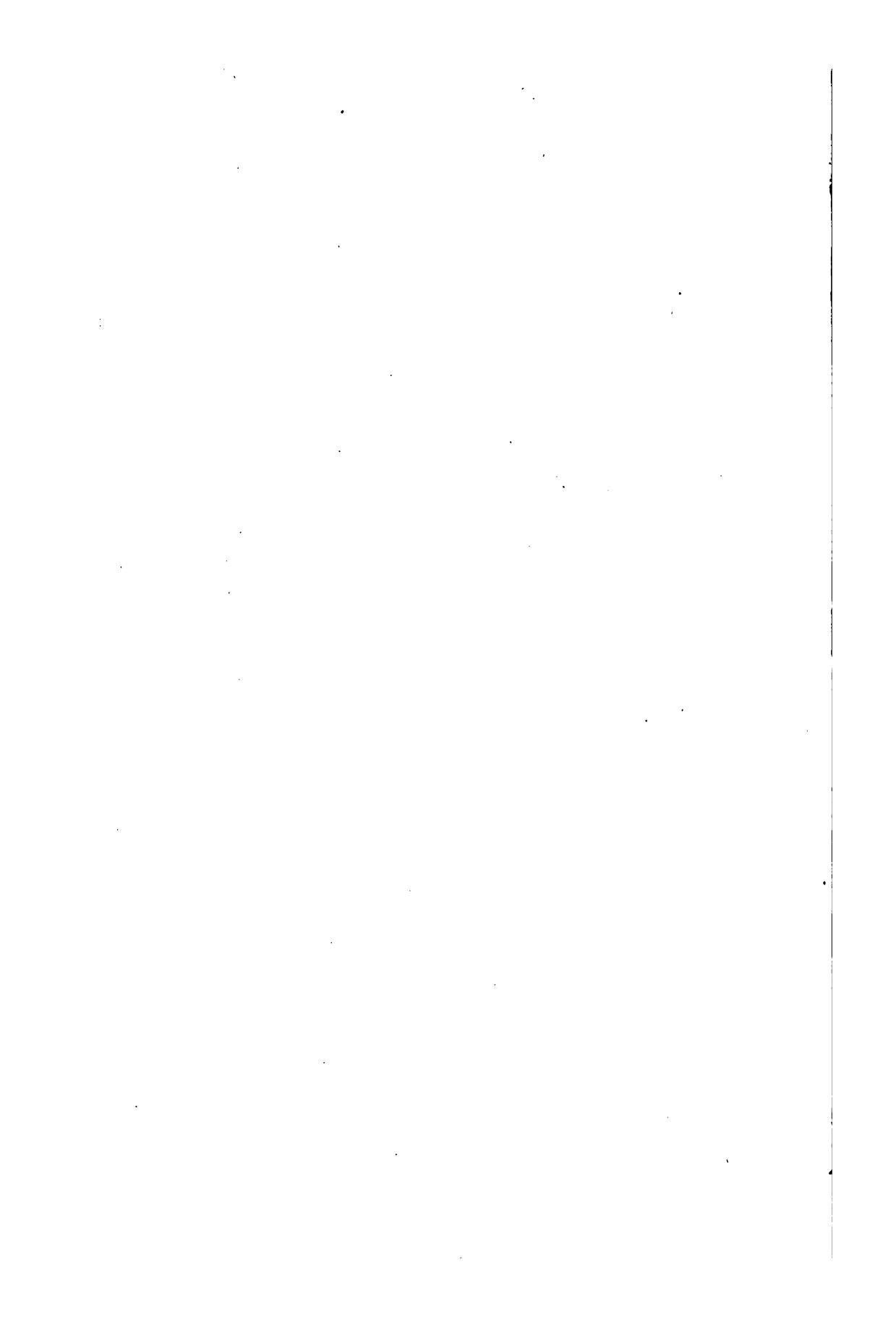
NEW YORK:
THE HOSPITAL GAZETTE, 102 WEST 49TH STREET.

1877.



CONTRIBUTORS TO VOLUME II.

Andrews, Edmund.. Chicago.	Loomis, Alfred L...New York.
Ashby, T. A..... Baltimore.	Lyons, Frederick A, New York.
Bermingham, Ed. J. New York.	McGraw, Theo. A.. Detroit.
Berry, W. B..... New York.	Pepper, William...Philadelphia.
Blake, Clarence J....Boston.	Piffard, Henry G...New York.
Brown-Sequard, C. E.	Putnam, Charles P.Boston.
Burge, J. H. H....Brooklyn.	Reyburn, Robert...Washington.
Byford, Wm. H....Chicago.	Roberts, John B...Philadelphia.
Cheever, David W.. Boston.	Seguin, Edward C.. New York.
Clark, Alonzo.....New York.	Shaffer, Newton M..New York.
Corchado, M.....Porto Rico.	Smith, Stephen....New York.
Cowling, R.O.Louisville.	Smith, T. Curtis...Middleport, O.
Crane, J. J.....New York.	Tauszky, Rudolf...New York.
Crosby, A. B.....New York.	Taylor, Robert W.New York.
Evetzky, E.New York.	Thebaud, J. S.New York.
Foster, F. P.New York.	Thomas, T. Gaillard. New York.
Hamilton, Frank H. New York.	Thomson, Wm. H. .New York.
Huber, Francis.....New York.	Twiss, Geo. E... .New York.
Hudson, E. D., Jr.. New York.	Vanderpoel, S. O., Jr.New York.
Jacobi, Abraham. . New York.	Weir, Robert F....New York.
Janeway, Ed. G....New York.	Wendell, Abr'm G. .New York.
Knight, C. H New York.	White, James C...Boston.
Lewi, Maurice J .. Albany, N. Y.	Wight, Jarvis S...Brooklyn.



ARCHIVES OF CLINICAL SURGERY.

VOL. II,

APRIL, 1877.

No. 1.

ORIGINAL PAPERS.

SIMPLIFICATION OF ORTHOPEDIC APPARATUS.

BY

EDMUND ANDREWS, A. M. M. D.,
Professor of Surgery in Chicago Medical College.

Orthopedic Surgery is encumbered more than any other branch of our art with an unnecessary complexity of apparatus. Very often the brace ordered by the surgeon is absolutely and utterly beyond the pecuniary ability of the distressed patient, and not unfrequently, when purchased, it proves so complicated that the family physician to whom the patient returns after visiting the city surgeon, neither comprehends, nor can successfully manage the terrible machine.

Before this branch of surgery can attain its proper usefulness it must attain to a higher perfection in simplicity, cheapness, and comprehensibility, and lay away among the paraphernalia of old torture chambers, very many of the appliances heretofore used.

New inventions are apt to be complex. It is only as we approach perfection that we attain to simplicity. Even in little things we find good illustrations of this principle. Not many years ago, surgeons dotted their apparatus all over with buckles in the manner of harness makers. It was only after years of experience that it dawned on the whole profession simultaneously that a strap can be buttoned upon a simple knob far more easily and quickly than it can be put into a buckle. The thought seemed to come to everybody at once, and now the buckles have almost disappeared.

One of the most complex and troublesome pieces of apparatus in use, is the one generally made to extend inflamed ankle-joints. It is effectual, but it is costly, cumbersome, and rather tedious to apply. For

some years I have used with the greatest satisfaction, and excellent results, a much simpler device. The following cut gives a correct idea of it. The top of the foot and the lower half of the leg constitute two cones whose apices meet at the ankle. Now if any moderately firm and well fitting material surround these parts and be laced together with some firmness, the two cones will be pressed apart, and extension of the ankle secured, or to put it in different terms, the inverted cone laced to the leg is a counter extending force, while the lacing together of the hollow cone embracing the upper surfaces of the foot tend to push that member downward, and thus makes extension upon the joint. To construct this a plaster cast should be taken of the foot and leg, with the foot hanging free and pointing downward somewhat. This position is found by experience to be much the best. A piece of wet russet harness leather is wrapped around the cast and crimped to a perfect fit by winding a stout cord, or a piece of webbing all over it. The leather laps over itself in front. After a few hours drying in an oven, or on a stove, the leather hardens and retains its shape. Before applying the leather, a little building out of the malleoli of the cast should be done with plaster of Paris, that the leather may be well moulded out, and not press painfully on those prominences. Eyelets are set in the overlapping edge, and in a strip of leather sewed to the part opposite it so as to allow of lacing it up to any desired tightness. The eyeleted edges of the leather should be wider apart on the dorsum of the foot than elsewhere, as owing to the yielding of that member, the edges lace together more than on the leg. The brace is finished by pasting in a chamois leather lining. It fits the limb like wax, keeps up a gentle and desirable pressure on the joint, maintains immobility and pushes down the foot so as to make an effective extension of the ankle-joint. No screws, racks and pinions, nor even adhesive straps are required. The action of the instrument has pleased me beyond measure by its simplicity, the ease with which it can be taken off and re-applied, and its efficiency in curing the inflammation.

The same principle can be temporarily carried out by means of a dextrine splint open behind, and compressed by an elastic bandage, or even by a common roller.

I have also found great satisfaction in simplified braces for inflamed



knee-joints.

If the knee can still be straightened I apply the following apparatus.

The leather lacer at the top spreads its pressure over a wide surface and also spreads out somewhat upon the bulge of the nates, so that hardly a perceptible pressure is exerted upon the veins at any one point; scarcely any, hence there is little or no tendency to that venous congestion and swelling of the parts below, which authors say the ordinary apparatus produces if no bandage is used, yet I think that the practice of employing a compression bandage is useful to the knee, even if no tendency to swelling exists.

EXTENSION SPLINT FOR INFLAMED KNEE IN THE
STRAIGHT POSITION.

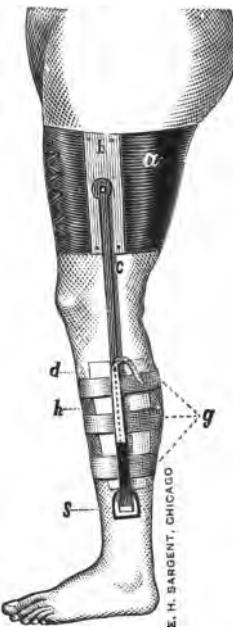
- a. Leather, laced in front.
- b. Steel Plate, riveted to each side.
- c. Rod, terminating in slot s. A similar rod is on the other side of the limb.
- s. Slot, with a friction roller.
- g. Adhesive Straps, to the lower end of which an elastic band is sewn.
- h. Elastic Band, terminating in a leather strap, which is passed through the slot s and turned up, and, being strongly stretched, is buttoned to a knob, d.

MEASUREMENTS REQUIRED.

1. Circumference of thigh close to bulge of nates.
2. Circumference of thigh one inch above top of patella.
3. Distance of these two circumferences from each other.
4. Distance from upper circumference to a point two inches above lower end of malleolus.

The rod c is much slenderer than represented in the engraving, and is loosely jointed to the steel plate b. The broad perpendicular adhesive strap should terminate a little above the slot s. To the lower end a stout elastic band is sewn, a few inches long, and of the kind used by some wooden-leg makers for springs. A leather strap is sewn to the elastic.

The opposite side of the limb is armed in the same way. The hip leather being laced on, the strap and elastic bands carried down to the slot s whose upper border is made by a little friction roller that the band



may run easily. The strap being drawn through the slot, is then stretched firmly upward by the hand and buckled to the knob *d*. It will be observed that while at first glance this may seem to be pulling up instead of downward, yet the fact is, the elastic in passing under the friction roller changes its direction and in fact, pulls strongly downward on the adhesive plaster and the limb to which it is attached. The same maneuver repeated on the opposite side doubles the force of the extension. The use of the elastic bands is not strictly necessary. A double tape carried through the slot and tied over the knob is simpler, and if properly attended to, is equally efficient; but the elastic is convenient, because in any yielding or stretching of the dressings its contractibility still keeps up the tension without requiring so much watchfulness on the part of the surgeon. Elastic bands were in common use fifteen years ago, but of late have been much neglected. If occasion demands it, the surgeon can easily construct an extempore form of this splint, using simply leather, wood, and a few screws, and putting them together with his own hands

It will be observed that there are no racks and pinions, screws, nor other mechanical contrivances for increasing the power. The amount of extending force required on a straight inflamed knee is never very great, and never beyond what the hands can readily exert by simply pulling firmly first upon one strap and then upon the other.

There is no ring or band surrounding the limb at the lower end of the instrument because such a thing is useless. The slot is kept in place by the band which passes through it, and cannot possibly get away. If it is desired to remove the apparatus for any purpose all that is necessary is to unbutton the two straps, when the brace can be slipped instantly off over the foot, and can be as easily re-applied. It is light, convenient, painless, and efficient.

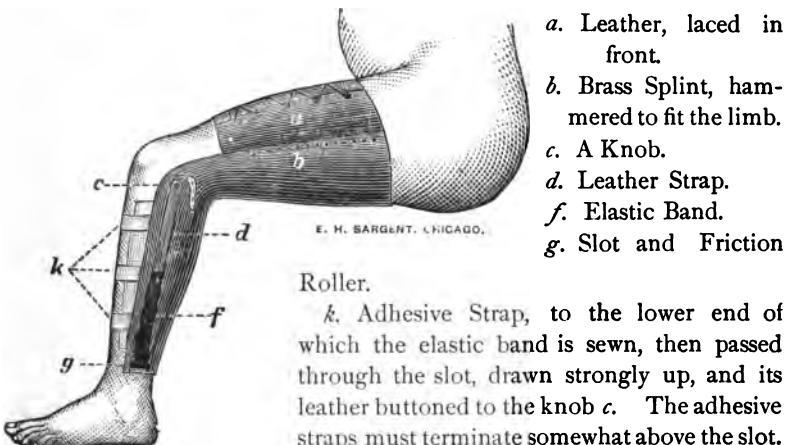
If, as often happens, the knee is not only inflamed, but also fixed in a bent position, most surgeons hold that it is necessary to straighten the knee before an apparatus can be worn. Now the straightening process itself is irritating, and tends to exasperate the inflammation. Dr. H. Davis devised an extension for bent knees, but it has not gotten into general use.

I have resorted with decided satisfaction to the following plan :

A plaster cast is first taken of the posterior half of the limb, from the nates to the heel. To this a thin splint *b*, of hammered brass, is fitted. The upper part is completed by the addition of leathers *a*, which lace in front, and by thus embracing the thigh and the lower portion of the

hip in its hollow frustum of a cone, makes a basis for counter-extension. A slot *g* is made in the brass on either side at the lower end, and provided as in the former apparatus with a slender friction roller on the upper border. Adhesive straps are applied in the same manner as before, terminating in elastic bands or doubled tapes, which pass down through the slots, and turning up across the rollers, button or tie to the knobs *c*. By some addition to its details, this apparatus can have a joint at the knee, and be made to gradually straighten the knee.

SPLINT FOR INFLAMED KNEE IN THE BENT POSITION.



Roller.

k. Adhesive Strap, to the lower end of which the elastic band is sewn, then passed through the slot, drawn strongly up, and its leather buttoned to the knob *c*. The adhesive straps must terminate somewhat above the slot.

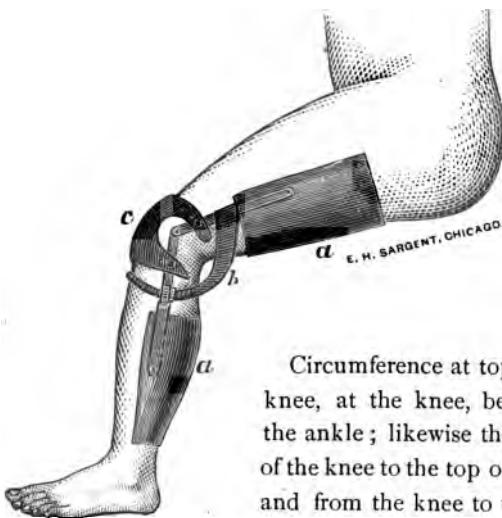
If there is nothing peculiar in the form of the limb, a common tinner can fit the splint to the patient without a plaster cast.

Where a splint is required purely for straightening knees which are fixed in a bent position, the following plan works admirably, and avoids the inconvenience of many of the splints now in use.

Many surgeons still rivet the thigh and leg pieces *aa* fast to the rods that pass to the joints at the knee, thus making each arm of the apparatus a rigid lever. The evil of this plan is that in spite of the knee cap *c*, when the extension force is applied the centre of the instrument draws back a little, and the entire pressure is made at the upper and lower ends, near the hip and the ankle. Here the instrument digs painfully into the flesh, in spite of all precautions. To avoid this, the armor pieces *aa* should hang by their centres, as a cannon hangs on its trunnions, by movable joints, so that they always apply themselves painlessly to the surface of the limb, pressing equally in all parts. This part of the plan has been in use quite a number of years, and seems to have occurred

almost simultaneously to several surgeons, while it is still unaccountably neglected by others. Being an old device among mechanics, its invention cannot be specially credited to surgeons. The power required for the extension has usually been obtained either by a straight brace screw behind the knee, or by a small endless screw on either side. The straight brace screw has the inconvenience of being in the way when the patient desires to sit in a chair. The endless screw joint, often incorrectly called a "cam joint," is by far the neatest and most compact power that has been used, but it has the objection of being very expensive; and, moreover, as it is so close to the centre of motion, the pressure on the teeth of the semi-circle is immense, and not unfrequently breaks them.

INSTRUMENT FOR STRAIGHTENING BENT KNEES.



malleolus.

Circumference at top of thigh, also above the knee, at the knee, below the knee, and above the ankle; likewise the distance from the centre of the knee to the top of the inner side of the thigh, and from the knee to the leg a little above the

- aa.* Sheet Steel Pads, lined with chamois embracing posterior half of leg and thigh.
- b.* A Curved Screw, on which a nut turns, to make forced extension.
- c.* Knee Cap.

MEASUREMENTS REQUIRED.

Expensiveness of apparatus is a serious objection for great numbers of the patients who need treatment; I have therefore sought to combine the economy of the screw with the convenience of the "cam joint." For this purpose I attach on each side a simple screw bent to a semi-circle. The screw is riveted firmly to the upper arm of the instrument, and runs through a perforated projection on the lower arm. A nut, turned by a key, furnishes the requisite power to force the limb to a straight position.

All the splints for treating *morbus coxarius* are modifications of the original idea of Dr. H. Davis. Most of them make extension by means

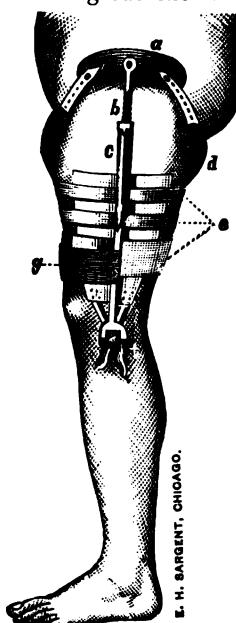
of a rack and pinion, which works well. Surgeons living in country districts, however, find it rather difficult to get them constructed by their home mechanics. They are deterred especially by the rack and pinion, which looks simple enough, but which is very difficult of construction to country locksmiths and gunsmiths. In such circumstances I have often advised the country surgeon to substitute a screw sliding in a tube for the ordinary extension bar, and the whole difficulty then disappears. The extension is regulated by the nut, which can be made hexagonal, and turned by a little wrench ; but even this is not necessary. If the nut is made to work easily, the surgeon can seize the tube in one hand and the screw in the other, and easily make with his hands all the extension the patient will tolerate, while the thumb turns the nut down against the tube to hold the extension. The nut should have a little knob or tooth on its lower side to fit into a notch in the top of the tube, to prevent it turning spontaneously during the movements of the patient. The following cut shows the screw fitted to a splint somewhat like that of Sayre. The steel semi-circular band *g* goes half around the front of the limb, and on the opposite side has a short rod projecting down beside the knee to tie tapes to, like the one shown on the hither side in the cut.

EXPLANATION.

- a.* Top Pad, applied just below crest of ilium.
- b.* Screw, sliding in Tube *c* and regulated by a nut.
- d.* Perineal Band.
- g.* Half Band of Steel in front of thigh.
- e.* Adhesive Straps, fastened to lower end of instrument, both sides of the thigh, by tapes.

In certain cases it is desirable to use a long splint, coming down to the foot, and riveted into the heel of the shoe. In that case the adhesive straps are transferred to the leg, and the tapes tied to eyelets or knobs properly secured to the lower end of the rod or to the shoe. The modifications required are obvious and simple, and do not need an engraving to be understood.

The belt strap around the waist and the strap to buckle around the lower part of the thigh, insisted on by many surgeons, are utterly useless ; the instrument assumes a better position without them. Its natural direction is decided by the line between the extremities of the perineal



band and the tapes on the adhesive straps; and this position should not be interfered with.

In all those cases requiring adhesive plaster extension, the surgeon will find the "rubber plaster" of Seabury & Johnson an immense improvement on the old varieties.

In joint diseases of the superior extremity a similar simplicity is attainable. I have under treatment at present a chronic inflammation of the wrist, with the following easily constructed apparatus. A rectangle of thin brass or tin is bent into the form of half a cylinder, long enough to extend from the elbow to the tips of the fingers. At each side of the elbow is a slot and friction roller. At the other end are two eye-holes in the end of the brass, half an inch in diameter. The hand being enveloped in rubber, adhesive plaster, with tapes attached, is secured by tying the latter into the eye-holes. Other plasters on the forearm above the wrist have elastic bands attached to their upper extremities, terminating in thin leather straps. The latter pass over the friction rollers at the top of the instrument, turn downward, and are buttoned to knobs on either side. This makes perfect extension; and yet the apparatus can be easily made in the smallest country village.

If the elbow requires extension, either in a straight or bent position, the same principle is perfectly available, by merely varying the form of the tin case. The friction rollers so often referred to are the simplest possible things. They consist of simple pieces of strong wire soldered to the brace so as to cross the desired edge of the slot. A little cylinder of tin or sheet brass loosely surrounds the wire, so as to revolve freely when the elastic band is drawn over it.

These things are simple, easily made, easily managed, and cost a mere trifle. The whole complex system of screws, nuts, racks, pinions, and extension bars of every description, are in nine-tenths of the cases cumbrous abominations compared with the less complicated plans. I confess to having used them in former years, but at present I only employ them in a few peculiar cases.

In the matter of spinal supporters for Pott's disease, a great step has been gained in the direction of simplification by the plaster of Paris dressing. It enables country surgeons, however remote from instrument makers, to apply to a large portion of the cases perfectly efficient supporters without the aid of any mechanic. If, however, a more permanent apparatus is desired, any village surgeon can construct an efficient brace for Pott's disease, if he will give attention to it and personally supervise his gunsmith or locksmith whom he will need to enlist in the work.

There are only two principles of any real value in this class of apparatus. One is the splint principle, which, applying steel splints with proper pads along either side of the spine, seeks to lash the body firmly back to the splints. This is not merely an attempt mechanically to arrest the growth of the deformity; it is curative of the inflammation. Every vertebra rests on three surfaces of support, viz.: the body of the bone in front, and the two articular processes behind. The body of the bone is alone diseased, and its inflammation is perpetuated by the rocking and pressure of the other vertebrae upon it. The articular processes are perfectly healthy in most cases. Now by flexing the spine well back against the splint, the pressure is brought upon the healthy articular processes, and taken off from the bodies of the vertebrae, which, being thus relieved, get well spontaneously.

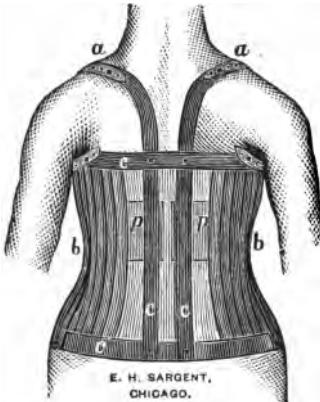
The other principle is that of the corset. Dr. Wood, of Boston, formerly made very efficient supporters, which were in principle nothing else but corsets. The corset principle is best adapted to the adult female form. Here the wide spread of the hips makes a rapidly sloping frustum of a cone, on which rests the inverted frustum formed by the chest, the junction of the two being at the smallest part of the waist. If a well-fitted corset, full of whalebone, be applied, and be made so as to lace in front, instead of using the ordinary steel locks, the action is as follows: The inverted cone of the waist rests in the hollow cone of the upper half of the corset. Now by drawing upon the strings at the lower cone, the corset tends to rise on the slope of the hips and to push up the cone of the chest with it. Hence the corset principle is a valuable auxiliary in adult female cases, and to a less extent in males also. In young children there is no contraction at the waist, and a corset acts only as a splint.

Now the country surgeon, by the help of a mechanic and any sewing woman, may easily combine both these principles in one instrument, as shown below. The corset should lace and not lock in front. The drilling of which it is composed must be gored to fit the waist accurately, and it should be filled as full of whalebone as it will hold.

The old obsolete plan of trying to lift the upper part of the body by means of extensible crutch pieces running up to the axilla, is now abandoned by all surgeons, because the axillary plexus of nerves does not tolerate any steady pressure.

The instrument makers of our large cities deserve severe censure for their folly in two things. First, their obstinate adherence to and trust in these useless sub-axillary crutch pieces; and second, the unprincipled way in which they take orders for spinal supporters

to be made from mere measures sent by distant patients, without their personal presence. A spinal support made without the personal presence of the patient is almost invariably a failure; yet many thousands of dollars are thus annually swindled out of patients illly able to lose it.



aa. Shoulder Straps.

bb. Corset, lacing in front, and well filled with whalebone.

cccc. Steel Framework.

pp. Pads, pressing on each side of the projection of the vertebræ.

If the patient cannot go to some surgeon of repute in a town or city, he should by all means get his home physician to construct a plain supporter on sensible principles, by the help of the village locksmith. He may depend upon it, that

although the work may lack elegance in its appearance, it will be infinitely more useful to him than a brace made by a distant manufacturer from mere measure, no matter how celebrated that distant and unprincipled manufacturer may be.

No. 6 SIXTEENTH STREET, CHICAGO, ILL.

DISLOCATION FORWARDS OF THE LOWER END OF THE ULNA.

BY
ROBERT F. WEIR, M. D.,
Surgeon to the Roosevelt and New York Hospitals.

The rarity of dislocation forwards of the lower end of the ulna will be appreciated by the fact that the exhaustive works of Malgaigne and Hamilton give a total of butten cases on record. Of this number nine are alluded to by the former author, and one by the latter. The fact brought out by a consideration of these cases and from the one now presented is that the violence was brought to bear upon the lower part of the ulna when supination was strongly marked. Thus Boyer reported that in his case the injury was caused by a man who, in endeavoring to eject a woman from his room, seized her roughly by the wrist when the forearm was strongly supinated. The two cases of Malle resulted from falling on the forearm when it was in a similar position. Dupuytren, who also met with such a

case, (or rather two, as the one reported by Malgaigne occurred in Dupuytren's wards,) stated that it was produced, as was also Malgaigne's, by trying to ward off a falling embankment. The remaining cases were met with in the practice of the following surgeons: Godelier, Valleteau, Espiaud, Parker and Desault ; the latter, however, encountered it in the cadaver, and from him we learn that the lesion had caused marked interference with flexion and extension of the wrist.

As to the reduction of the dislocation, though the seizure of the shaft of the radius by one hand, and the shaft of the ulna by the other hand was resorted to by several, who then attempted to move the bones towards each other while pulling them apart laterally, yet the best success has been obtained by direct pressure upon the dislocated head of the ulna, forcing it thus into its place.

CASE.—Mrs. D., a widow, 48 years of age, rather stout in habit, was seen by me February 9th of the present year. She had a few minutes previous to my arrival been calling down the dumb waiter closet to her man below, when he, misunderstanding her commands, suddenly drew down the dumb waiter, so that her right hand and lower portion of the forearm were forcibly supinated and pressed down by the descending shelf, while the posterior surface of the forearm rested fixed on the ledge of the opening into the closet. The wrist presented a most singular deformity ; it was much narrower than the other one, and in place of the prominence usually given to the lower third of the ulna, there existed a deep groove nearly two inches long, and the head of the ulna had disappeared from its normal locality, and was found projecting very slightly on the palmar aspect of the joint, much nearer to the median line. The hand was held in a semiflexed position, and nearly completely supinated ; and from the great pain but little motion could be imparted to the joint. A dislocation forward of the ulna was recognized, and an attempt was made without an anæsthetic to reduce it by extension and pressure of the ulna towards its proper place. This was so painful that ether was administered, and then very slight direct force upon the head of the ulna was sufficient to crowd back the dislocated bone into its original locality. Before this was accomplished, it was noticed that flexion was much hampered, and pronation also much limited. No fracture was to be found, and after the reduction the motions of the joint were perfectly restored. Considerable swelling ensued, lasting several days, but at the end of ten days the wrist had nearly resumed its freedom of motion. This restoration of function has since been completed, as has been shown in a recent examination of the patient.

TREATMENT OF BOILS BY SULPHIDE OF CALCIUM.

BY
T. CURTIS SMITH, M. D.,
Middleport, Ohio.

R. S. W., æt. 24, lawyer, nervous temperament, of general good health, spare habit, industrious, temperate, costive habit, came to me complaining of a large boil on his right thigh, with the statement that he "had not been clear of boils for several months; as soon as one commenced to recede or suppurate, one or more new ones would commence to make their appearance, and every large boil is encircled with a crop of small ones." He thought that each one would be the last, but had now become discouraged in waiting for the last one to leave him. As he was in average health in all other respects, I at once prescribed sulphide of calcium, grs. iii, every three hours. The boil now on his thigh was about three and a half inches in circumference at its base, very painful, and throbbing at every pulsation. The boils preceding this one had been very slow in development, and suppurated but little.

On the second day after commencing the treatment the boil softened at its point, and on the third day discharged pus profusely. A boil that had commenced in another locality began on the second day to disappear, and soon no appearance of it could be discovered. The large suppurating boil was not encircled by a crop of small ones, as had been all its predecessors. From that day to this (18 months) he has not been troubled with any furunculous eruption.

CASE 2.—Mrs. S., æt. 68, of nervo-bilious temperament, while recovering from a long attack of serious nervous disease, became afflicted with successive crops of boils. They appeared on the neck, shoulders, arms and thighs, and being often located in such a manner that she could not lie in any position without great discomfort. Like the former case, as soon as one crop commenced to recede a new crop would appear, and none of them suppurated more than a few drops of bloody pus; some none at all. The general tonic course she was on was continued, and the sulphide of calcium, grs. iii, given every two to three hours.

By the next day the boils were less painful. The large ones, several in number, commenced to discharge pus very freely on the second day of this treatment, and rapidly disappeared. Several small ones, the size of a hazel nut to that of a small chestnut, commenced to wilt on the second day of the treatment, and in four to five days nothing was left to mark their former existence except a purple spot. No new crop of furuncles followed, and her gain in general health was much more rapid

than while annoyed by the boils. This case I treated in February, 1875.

Mr. B., a steamboat captain, a large, portly man, sanguineous temperament, came to me a short time since with a very large boil on the anterior face of the right thigh, stating that he had not been entirely clear of a large boil in some locality for six months; that he had tried various remedies without effect in preventing new ones from coming out. His general health was excellent, and nothing discoverable at fault except these boils. He was ordered sulphide of calcium, grs. v, every three to four hours.

Three days later he reported that the boil was becoming soft and would soon burst. He also stated that this one had advanced more in the last three days towards maturation than any of the former boils had in two weeks. In this case, as in the others, the boils had discharged nothing but a few drops of bloody pus, were very slow in developing, and also in the retrograde process; one boil sometimes continuing for four to five weeks. The one now on hand suppurated very freely on the fifth night, after which it rapidly disappeared. No new ones put in an appearance. No disturbance of the general health or appetite was at any time noticed while taking this agent; on the contrary, patients have generally spoken of feeling better while taking it than before commencing its use.

My friend, Dr. E. C. Fisher, at my suggestion put a case of slow hard "blood boils" on this remedy, several of which existed on the face, were hard, red, oval tumors, with no sign of suppuration in them. In three to four days they showed signs of softening and of commencing absorption. In a very few days more they disappeared without suppuration.

I have found this agent equally beneficial in the slow form of scrofulous abscess, shortening the time of its existence very materially. It has also done me very good service in cases of infantile eczema, and some chronic scaly skin diseases. As this is purely a clinical paper, I will not offer here any theory as to its mode of action.

RECTO & VESICO-VAGINAL FISTULA—REMARKABLE RECOVERY.

BY
J. H. HOBART BURGE, M. D.,
Visiting Surgeon to Long Island College Hospital.

The case which I desire to present may be epitomized thus: extensive laceration in a primipara, resulting in rectal and vesical fistula; operation on second day; sutures all failed; absolute incontinence of urine, and no control over the alvine evacuations; experts gave no encouragement

for the future; perfect recovery and restoration of functions induced by very frequent ablutions with carbolic acid in water, and constant dressings of carbolic acid in oil; subsequent pregnancy and parturition, without accident. This epitome so thoroughly presents the main features of the case, that I am somewhat tempted to omit the full record, and pass immediately to comments and reflections; at any rate I may spare myself and the reader all reference to minute details.

Mrs. R., age 20, perfect specimen of physical excellence, primipara, at full term, had not suffered any of the ordinary inconveniences of pregnancy.

The first indication of approaching labor was a rupture of the membranes and a free draining off of the liq. amnii for more than two days before she had any pain. At the end of another day labor had advanced sufficiently to show a breech presentation—child living, and condition of mother good. Through the next twenty-four hours labor active and progressing regularly, but slowly. Patient had obtained some rest by the occasional inhalation of chloroform, during which the contractions were regular and strong, and the dilatation of the os apparently promoted.

Forty-eight hours had now passed since expulsive pains began, and slight symptoms of exhaustion began to manifest themselves. Dr. Skene was called in consultation, and advised non-interference. Labor continued through next twenty-four hours, with some advance of the breech, and full dilatation. Pains were now less and less efficient, and upon consultation with Dr. Skene it was decided that delivery could not be completed without artificial aid. By means of the blunt hook, and ultimately by forceps to the head, the child was born alive, but died on the third day from imperforate intestine, the imperforate condition extending high into the alimentary canal, as evinced by the fact that no urine was secreted during the three days of its life.

Upon careful examination of the mother, it was found that the urethra was badly torn, and the sphincter ani entirely divided. During the next forty-eight hours the bladder was emptied by the catheter, which was introduced through a confused and swollen mass. From this time the incontinence was complete.

Five deep silver-wire sutures were made in the perineum by Dr. Skene, at my request, on the second day. These were removed on the tenth day, when to our great disgust it was evident that no improvement whatever had taken place. A dressing of carbolic acid and olive oil had been constantly used, with such ablutions as were consistent with suitable rest of the parts.

After the stitches were removed my patient was examined by Prof. A. J. C. Skene, and also by Dr. Alexander Hutchinson, and from neither of these gentlemen of large experience could I get any encouragement that either with or without operation, my patient would now be ought else than an object of commiseration. Her vagina was almost constantly occupied by a mixture of feces and urine. I procured some fine oakum, and kept the parts gently packed with this, saturated with a mixture of carbolic acid (liquified crystals) and glycerine, each one drachm, and olive oil one pint. This was renewed as often, day and night, as seemed to be necessary, either for comfort or cleanliness; and whenever the change was made a lotion of carbolic acid and glycerine, of each one drachm, to warm water one pint, was faithfully used with a sponge, till the parts were as thoroughly cleansed as possible, and then the carbolated oil dressing was immediately reapplied. At the time of my daily visit I performed this ablution myself, in order to note the progress of the case, and also to instruct the nurse exactly how to proceed in my absence.

This patient was not restricted as to position, any more than one would be after the operation of lithotomy. The same ablutions which were used to keep the lacerated tissues in a healthy granulating condition were also necessary to preserve the integuments about the hips, so constantly were they subjected to irritation by the excreta.

What remains of this case can be expressed in very few words. The healing progressed uniformly, so that at the end of six weeks perfect control was regained over both the bladder and the rectum. I do not think this result could have been attained by any less vigilant course of treatment, and I attribute much to the faithfulness of the nurse in the performance of a duty which was very exacting by night and by day. Another point which I desire to emphasize is the use of carbolic acid in this case. I attribute to it an influence which I do not remember to have seen specially referred to—I allude to its immediate oxidizing effect upon granulating surfaces. If a film of carbolic acid be poured upon a coagulum of venous blood, a bright pink instantly takes the place of its dark hue. The constantly refreshing influence of this principle I believe had much to do in disposing these tissues to heal.

It is now two years since this disastrous parturition occurred, and the strength of the cicatricial tissue has lately been put to a severe test. Eight weeks ago the second labor was accomplished in about four hours from its inception. Child, a female; weight, ten pounds. A few fibres were rent, but no unpleasant symptoms were experienced. Mother and child are now perfectly well.

TRANSLATIONS.

DRESSINGS FOR WOUNDS.

A series of five Clinical Lectures delivered at the Charity Hospital, Paris.

BY

L. GOSSELIN, M. D., Etc.

Professor of Surgery in the Faculty of Medicine of Paris, Etc.

Translated from "*La France Medicale*" for the ARCHIVES OF CLINICAL SURGERY,

BY

BARNARD ELLIS, M. D.

GENTLEMEN—We are called every day to apply dressings to wounds and sores for the purpose of producing cicatrization, and I believe it to be not unprofitable to bring before you from time to time the end we wish to attain, and the processes by which we arrive at our results. In my estimation, then, it will be well for your instruction to inaugurate the series of clinical lectures which I am bound to give you this year by the study of the different modes of dressing wounds, or, to speak better, by the study of the physiological end which we propose to ourselves each time we apply a dressing to a wound. In a majority of cases the kind of dressing is of little importance, in the proper meaning of the word, as one dressing will succeed as well as another.

At all times, in reality, when we have to do with a wound, the first general indication, and which overshadows all others, is to cover it, and keep from it all exterior agents. Now, oftenest the mode of protection is unimportant. As for instance, in case of a wound made by a pointed instrument, or a very superficial wound made by a sharp-cutting instrument, the dressing or protection simply favors the natural tendency of all wounds of this nature—that is, to immediate cicatrization. Yet it is well to remark, that before applying the dressing we must suspect the possible presence of foreign bodies, of which some are visible and easily removed—such as bits of linen, clothing, etc.—and of others not visible, not palpable, and which necessitate repeated washings, and perhaps suctions with the mouth or by the cupping glass. I shall speak afterwards of those infinitely small microscopic agents so often communicated by operating knives, as for instance, and to us a familiar example, the prick by a dissecting knife. These precautions once taken, the mode of dressing, I repeat, is indifferent.

Unhappily, wounds do not always present this benign character; they are often very extensive. They are no longer simple solutions of

continuity, but losses of substance, long and deep, reaching often to the aponeuroses, which in many cases they do not respect. The surgeon must then look for a dressing which will respond to one of the three following objectives, viz.: to favor either immediate cicatrization, or cicatrization after suppuration, or, as well, intermediary cicatrization.

Before deciding upon the first of these indications, we must be sure that the condition of the wound, is such as to favor healing by the first intention. * * * * The edges must be clean, without violent contusions, free from all foreign bodies, blood clots, &c., and juxtaposition of analogous tissues made as far as is possible; that is, skin to skin, muscle to muscle, &c.,

We then see exuding from all parts of the wound, in its depths as well as upon its lips, following a moderate irritation, which Hunter called adhesive inflammation, a transparent, roseate liquid of a syrupy consistence. This is plastic lymph, which Thomson, however, called *coagulable* or *organizable* lymph, a fibrino-albuminous substance, of which the fluid parts are re-absorbed, which after twenty-four hours becomes filled with newly formed vessels, and which becoming more and more vascularized and organized, is destined to become the cicatrix.

I shall occupy no more time on this point. I hold nevertheless that this exaggerated transudation of plasma is not sufficient to provoke complete immediate reunion. Certain modifications must intervene, and these interventions are accomplished at the expense of the cellular elements. These cellular elements, these corpuscles of the conjunctive tissue, multiply themselves by division, and this process commenced in the case before us in less than an hour. It established a sort of current from the capillaries to the cells, and from the cells to the capillaries. These cells, separating themselves, send out mutually prolongations, and are endowed with a very appreciable individual locomotion.

Recklinghausen has, however, explained these curious phenomena perfectly. This segmentation of cellular elements coincides exactly with the resorption of one pint of this plastic lymph, of this *organizable* lymph that I have already spoken of, and soon comes the moment when the juxtaposed surfaces are formed only of cells, re-united by a weak quantity of gelatinous tissue, which becomes solidified little by little.

I have used the term adhesive inflammation. We are always disposed to admit this inflammatory process in surgery, so rare is perfect immediate reunion.

There is always one point which suppurates, a point limited as possible, but which, in spite of all our care, does exist, and we have a *sort of*

mixed reunion, which we must carefully guard ourselves from confounding with *intermediary cicatrization*, a term which I reserve for further explanation as an entirely different variety. To favor the evolution of these phenomena certain processes are used.

First, I ought to say to you that immobility is the essential condition precedent to healing by the first intention; and, strictly speaking, it alone is sufficient where the sides of the wound are in contact. This repose of the parts is assured by the various means used in bringing about this contact.

The position is equally of extreme importance, and it is a general precept in the subject matter, and one from which we should never allow ourselves to deviate, that the parts be always placed in an unconstrained position. To this precept there is no exception. There was a time when bandages were used to retain the lips of wounds in place, but before long it was found that they were treacherous, heavy, difficult to apply, and badly supported by the patient, and a great advantage was found in replacing them by more simple means—sutures and agglutinants. Thus, then, you will find it well to employ the different modes of suture, the spring forceps, the use of which Vidal popularized, and all the series of agglomeratives, from the strips of dyachylon plaster to the little bands of cloth dipped in calloidion.

But, gentlemen, there are many superficial wounds where it would be illusory to hope for cicatrization by first intention. Without counting ulcerous wounds, all those produced by blunt instruments, and which have become complicated by attrition or mortification of the integuments, gun-shot wounds, for example, are fatally given to suppuration. Aside from these wounds, there are others also, which, without presenting the same characters, suppurate nevertheless.

Now, we should ask ourselves what is the proper dressing in these different cases. But before entering upon this study, in view of this variety of wounds, I wish to call your attention to the fact that there are three periods which must be held in careful account. They are: *First*, the period of modification or inflammation; *second*, the period of suppuration, with formation of a special or pyogenic membrane; and *third*, the period of desiccation of this same membrane.

In surgery we cannot occupy ourselves too much with the first of these periods, which is called also the *period of preparation* for suppuration, the inflammatory period, because the phenomena of modification—the expulsion of the mortified parts—are always accompanied with local symptoms: redness, swelling, heat, and sometimes fever, with a train of

more or less formidable general symptoms. In these cases we must watch attentively the progress of the general symptoms ; but for the moment we return to the subject of dressings—those dressings which offer the most advantages. And it is to those dressings which best protect and at the same time moderate the inflammatory processes, or, at all events, do not excite them, that we must turn ; and in this antiphlogistic treatment we have simple cerate, cold cream, glycerine, cataplasms, water dressings, and incubation.

Cataplasms may be applied warm or cold.

Water may be applied at various temperatures, and in various ways ; from 59° to 68° F., and by imbibition, irrigation, and immersion.

Imbibition consists in covering the wound with wet cloths, covered with India rubber cloth, to prevent cold and avoid evaporation.

Irrigation consists in pouring a uniform current of liquid upon the surface of the tissues. Many apparatuses have been invented for this, but the best is that of my colleague, Mr. H. Larrey, which consists of, first, a vase, placed above the injured spot ; second, any vessel to receive the liquid after it has bathed the wound ; and third, of a syphon of glass or tin, which conveys the liquid from the vase to the wound. Often a simple band of cotton cloth fixed in the vase answers well.

Immersion is simply a local or general bath, and I have not been able to get so good results as have been claimed for it.

Incubation has fallen into oblivion. J. Guyot, in 1840, imagined that to submit the wounds to a prolonged action of heated air, say from 86° to 104° F., was beneficial. Lately, in 1870. Dr. Leon Le Fort proposed a mode of dressing by a continued bath, which consisted of several compresses wet with alcoholized water, and hermetically sealed with waxed cloths covering all the neighboring parts of the member. Liquid alcoholic evaporation in this case cannot take place, and the dressing becomes a sort of continued bath.

Such are, in a few words, gentlemen, the antiphlogistic methods which render such great service during the period of modification of wounds which will eventually suppurate.

We come now to the second period. It is the pyogenic membrane which brings about cicatrization, and you will find in your text books what this membrane is, and what are its characters. * * * * It is by the drying up or retraction of this pyogenic membrane, this new granulous tissue with which the wound is covered, that cicatrization comes ; and this state constitutes the third period, which is confounded with the second in a point of view of dressing by choice of all the modes, which

second period is characterized by three great phenomena; viz.: first, the progressive retrogression from the periphery to the centre of the pyogenic membrane; second, the diminution of purulent secretion; and third, the complete desiccation of this membrane, which partakes the characters of fibro-cellular or cicatrical tissue. Thus reparation of loss of substance is found, and this repair differs from immediate union in this, that this new membrane supplies the demand consequent upon the absence of immediate reparation of damage done.

Now when these two periods are passed regularly, without complications, nothing intervening to embarrass the progress of the phenomena which I have briefly described to you, I would say voluntarily that the mode of dressing is indifferent, as in these cases all our dressings are good, provided they fulfill the two special indications of not giving pain and not bringing contagious substances upon the wound. This second indication is easily fulfilled in our private practice where our patients are by themselves and in good hygienic conditions, but it is an entirely different matter in our hospital practice, where our patients are in close neighborhood where there is agglomeration of disease. This fact is unhappily too well demonstrated today, although we have no unexceptionable and positive proofs upon which we can rely. It is, perhaps, going too far to say that in our hospital wards all the linen, the strips of cloth, the material for dressings, are full of miasms; that the lint is impregnated with deleterious substances; still it is wise and good surgical practice to suspect this contagion, and to act as if it existed in fact. Then, when one of those terrible epochs (which are unhappily too frequent) come to us in the great hospital centres, those fearful complications of erysipelas, hospital gangrene, purulent infection, etc., we must redouble our vigilance, and be careful not to allow dressings to be carried from one patient to another. I repeat, that those two conditions fulfilled—first, giving no pain, and secondly, conveying no contagious substances upon the wound—all modes of dressing seem to me to be alike; and if you will consult the old pharmacopœias you will be utterly surprised and astonished at the innumerable quantity of topical dressings described there, which proves superabundantly that suppurating sores, when the hygienic conditions are good and favorable, heal under no matter what dressing or salve may be used.

But besides these cases of normal progress, so to speak, we have those where particular dressings are necessary. These are found particularly in hospitals. We often meet wounds which become irregular under special influences; the granulations become carious and bristling,

standing out each one by itself, of a feeble and pale color, the pus becoming by loss of its consistence, serous fluid, and the general appearance of the sore is wan and pale. It is at this point that the work of reparation ceases. The question now is how to remedy these accidents, and the dressing should be so modified as to return to this anæmic, atonic, sore, life and force, that the work of cicatrization may proceed to full repair. General treatment and change of hygiene will do much, * * * * but we are now occupied with the subject of dressings. In these cases of atony success is often found in the use of aromatic wine, in styrax ointment, which irritates the sore, excites and animates vascularization and secretion of pus. So also basilicon ointment, but little used now a days, and a solution of sulphate of zinc, 200 parts to 1.

We have phenomena of still another kind. Ecchymoses, sometimes disseminated, sometimes united in groups, appear on the surfaces of the wound. Little ulcerations may appear, or, perhaps, this granulous membrane has a whitish coating, which Robert called the diphtheritis of wounds. This is generally dissipated by cauterization with nitrate of silver, or with lemon juice.

In other cases we have hospital putrefaction, which I shall define by three words, diphtheritis, ulceration, and gangrene; against which pulverized camphor and particularly cauterization by the red hot iron succeeds.

Now, gentlemen, as these two last periods may present either one of these irregularities, as I shall explain to you, I have not separated them in the study of the dressings which ought to be used. Besides these superficial sores, there are others with a larger surface, which may cicatrize without the mechanism of immediate union, or union by the first intention, without there being more suppuration. These sores follow an intermediary course. The edges show but slight swelling, they do not become too red, and the inflammation does not spread.

These borders furnish sanguinolent serum. Then, when this state has persisted for four, five, or six days, when we believe it is going to cease, to give place to other phenomena, that we are nearly ready to give it new attention, we are astonished to see the symptoms persist, without there being any trace of a pyogenic membrane, or of suppuration. During eight or ten days this serum presents itself with the same characters as at the beginning; then soon the place becomes dry, and a new tissue is formed, through which reparation is effected. This tissue is formed more slowly than in the case of union by first intention, and more quickly than in the case of union by second intention; quicker

than in wounds of the head dressed in a certain way, with alcohol, for example, and I attach very high importance to this particular ulceration, which I have studied with great care. This is what Dr. Jules Guérin brought to notice in speaking of immediate organization, which is generally effected under the skin, a work analogous to that which presides over reunion of fibrous or of osseous tissues. Now the processes which go on under skin which has not been implicated, may also go on upon certain dressed superficial sores, with the aid of certain processes. I insist upon this point, gentlemen, for I shall recall it soon to demonstrate to you that in the cicatrization of deep wounds it is necessary that immediate organization intervenes.

I have said enough upon the subject of superficial wounds. I must now approach the study of the dressings which ought to be applied to wounds of another variety, and much more important than the preceding ones described. I intend to speak of deep wounds. It would be easy to make a multitude of divisions, but first, before and above all, we will consider the deep wounds which implicate the bony structures. This deserves our particular attention, because, in a certain measure, the mode of dressing will prevent the development, or, at least, retard the progress of those terrible accidents which too frequently complicate, alas, these deep wounds, and so seriously menace the life of the patient.

What then are these dangers so grave? I do not wish to study them in detail; I only recall them to your attention. First, we have the traumatic fever, which may intervene in the first period of healing, which fever will produce almost fatal suppuration if left to itself, which fever Richerand says is the inseparable companion of all wounds having a certain extension and curable by suppuration; and which fever Dupuytren believed had for its end and aim simply the preparation for cure, and of which the presence as well as the intensity depends upon the number of tissues involved, and the variable forms in which they are found, according to their nature and their mutual dependence one upon the other. Secondly, there is prevalent infection when the pyogenic membrane is formed. Now the question is how far can the dressing modify this tendency to aggravation. But to answer clearly and precisely such a question it is well to establish certain distinctions among these deep wounds which implicate the bone.

First, we have wounds of the skin which are narrow, for example, in case of compound fracture.

Secondly, we have wounds where the skin has disappeared upon a large surface; for example, amputation of the thigh.

In the first case, the dressing should have for its principal indication, its first objective, by all the means at our command, immediate cicatrization of the integument. To this end we must put the deep parts in such conditions that they may repair themselves, after the mechanism indicated by Guérin, that is, by *immediate organization*. And when we think of it, gentlemen, it is altogether curious, and instructive at the same time, to see how difficult it has been to establish this surgical fact, this indication nevertheless so simple, and what obstacles it has had to surmount before it was able to conquer, so to speak, its freedom. For a long time we were occupied with a single idea, viz : to calm by the aid of emollient topical dressings the inflammation of the edges of the wound, without thinking of the possibility of reuniting these edges in the end to suppress suppuration, and thus remove from the wound the possibility of those grave complications which prevent cicatrization. Dr. Chassaignac was the first who called attention to this point. In 1844, in the seance of the 11th of November, he showed before the Academy of Sciences that for three years he had put in practice in his hospital service a mode of dressing which he called *dressing by occlusion*. He covered the place with an immovable diachylon plaster in imbricated strips. The pus was allowed to escape through the fenestrated linen bandage, coated with simple cerate, the whole covered with lint. At the same date, Langier employed for the identical purpose gold-beaters skin, covered with a thick solution of gum Arabic. He attributed to this dressing a special property. He believed that the dried pus and blood formed a crust or scab, under which cicatrization took place. Imbricated bands of collodionated cloth fulfill the same indication, for in this the whole object is to maintain contact of the edges, favor cicatrization by excluding the air, and so facilitate the development of immediate organization.

But that which succeeds in this kind of wound will, without doubt, fail where there is large loss of substance, in those yawning wounds with osseous centres, such as are seen after capital amputations. These wounds, if left to themselves, are fatally prone to suppuration. The blood which bathes its surface will undergo putrid transformation ; gangrene will strike it in certain points, and we shall pass through all the series of the accidents of mortification. But you can easily understand that this surface constituted of elements so different, of tissues so dissimilar, must undergo a profound modification before the pyogenic membrane can normally establish itself. And all this *ensemble* of pathological phenomena fails not to bring with it a train of general symptoms, upon

the gravity of which there is no illusion today for any person.

Now, gentlemen, the exact question is to combine our dressings so as to efficaciously intervene in this struggle between reparation and mortification of the tissues, and so to make our combinations as to secure victory to the work of reparation.

We now know very well what this formal, clear, and categorical indication is, and are no longer embarrassed, as we used to be, to formulate it. But this is not to say that we may be under the shadow of hesitations and gropings in the dark, but to show to you, gentlemen, that all the dressings proposed, while they may give good results, are each liable to be followed by failure.

At the bottom of all this is a truth which I wish to bring clearly to your minds; it is that all the dressings which have been eulogized within the last few years have had their times of brilliant success; all have also failed under certain conditions which it is impossible for us to appreciate. It is therefore wise to guard ourselves against the infatuation which accompanies innovations of all sorts, while it would be equally unjust to ostracise such or such a dressing, simply because its use is not constantly crowned with success. * * * * We are then to carefully study for ourselves, * * * * and to form a sound and serious opinion upon this question, a question of the gravest importance, since the lives of our patients are intimately interested.

For the sake of clearness in the explanation of facts, I shall divide the numerous modes of dressings into seven groups.

(To be continued.)

PROGRESS OF SURGERY.

REPORT ON THE SURGICAL DISEASES OF WOMEN.

BY
FRANK P. FOSTER, M. D.

On the Treatment of Rupture of the Perineum.—(Dr. G. G. Bantock, *Obs. Jour. Great Britain and Ireland*, Jan., 1877, p. 665.) Bantock excludes from consideration those superficial lacerations which involve only the skin or mucous membrane, *as far as* the perineal body. He argues in favor of immediate operation, opposing the attempt to secure union by merely keeping up apposition of the lower limbs, since this, although it keeps the lacerated surfaces in contact, at the same time closes the vaginal outlet, so that the lochial discharge finds its way out as best it can, *i. e.*, as much between the raw surfaces as *per viam naturalem*. In his own experience he has never known the immediate operation to fail, or the contrary method to succeed. Simple deep sutures should be applied, with as much care and skill as in the remote operation.

In the remote operation he discards the quilled suture, as causing projection and semi-strangulation of the perineum, and uses deep sutures of silkworm gut. First, however, if the laceration extends into the rectum, after completing the denudation, the rectal mucous membrane is brought together with fine sutures of Lister's catgut, which are left hanging out from the now restored anus. Like Thomas, he introduces the deep sutures in such manner that, after they are all inserted but not tied, no part of them is visible in the wound. They therefore include the whole depth of the wound. The bleeding having ceased, and the wound having been cleansed of coagula, the nates are allowed to approach, and the knees brought together. The sutures are then collected and held tight, while the tissues are pressed down upon the septum, so as to secure perfect coaptation by pressure from outside, but *not between* the sutures. The latter are then held firm by an assistant, and successively tied, beginning with the one next the anus. With these precautions, inversion of the skin seldom renders superficial sutures necessary. Bilateral division of the splincter ani and semilunar incisions through the skin are unnecessary.

Urinary Fistulæ [Zur Casuistik, Therapie, und \mathcal{A} etiologi \acute{e} der Urinfistelu des Weibes,] (Dr. A. Hempel, *Archiv fur Gyn \acute{e} kologie*, X Bd., 3 Hfs.,

1876, p. 479.)—Hempel reports sixty cases occurring at Spiegelberg's clinic. Spiegelberg has no distinctive method of his own, but endeavors to adopt the advantageous features of various methods. His results were as follows:—Nineteen simple vesico-vaginal fistulæ were perfectly cured; one by cauterization, twelve by one operation, three by two, one by three, and two by four. Of sixteen complicated vesico-vaginal fistulæ, eleven were perfectly cured; three by one operation, three by two, three by three, and two by four; two were improved; two patients declined further operation, and one was still under treatment. Of eight superficial vesico-utero-vaginal fistulæ, six were perfectly cured; one by cauterization, two by one operation, one by two, one by three, and one by five; one patient declined further treatment, and one died. Of eight deep vesico-utero-vaginal fistulæ, six were entirely cured; three after one operation, one after two, one after three, and one after seven; and two patients left the institution before a new operation could be undertaken. Seven vesico-uterine fistulæ were perfectly cured; two by cauterization, one after one operation and cauterization, three after one operation, and one after four; two uretero vaginal fistulæ still remained under treatment.

On Vesico-Vaginal Fistula, (Dr. Nathan Bozeman), *The Lancet*, Nov. 4, 1876, p. 633.—Dr. Bozeman reviews the points of his own method of operating, which he calls "autoplasty by gradual approaches." He deprecates kolpokleisis, or obliteration of the vagina, stating that, in the five per cent. of cases in which it seems to be called for, little or no permanent good can result from the expedient, however successfully accomplished. After discussing some of the alleged disadvantages of his method of treatment, the author seeks to account for the lukewarm character of the support at present given by many surgeons to the suture operation, by their lack of success with it, due, as he thinks, to inattention to other morbid conditions of the vagina than the fistula itself, to the preparation of too broad or flat surfaces in paring the edges, and to the adoption of the dorsal or lateral position of the patient. He gives renewed expression to his decided preference for the button suture, regarding it as surer than any other form of suture to prevent reopening of the wound by recontraction of the dilated vagina during the healing process.

On the Method of Operating for Vesico-Vaginal Fistula, being a Comparison of Bozeman's Operation with that of the Author, (By the late Prof. Simon of Heidelberg), *Obstet. Jour. Great Britain and Ireland*, Oct., Nov., Dec., 1876, pp. 435, 497, 589, from *Wiener Meds Wochenscler*.—Simon

thus rapidly sketches the essential differences between the two methods of operating: "While I operate on the patients in the supine position, with the buttocks much raised (an exaggerated lithotomy position), Bozeman makes use of the knee-elbow position, in which he fastens the patient. While I endeavor to draw forwards the parts bordering on the fistula, whenever this can be attained, Bozeman performs the operation while the parts remain in situ. While Bozeman pares the edges for the most part with scissors, I operate almost exclusively with the knife. While Bozeman employs a very complicated wire suture, I use a simple knotted suture of silk thread. And while Bozeman, in the after treatment, keeps a catheter permanently in place, and often gives large doses of opium, I enjoin no measure of precaution whatever, but allow the urine to be passed at pleasure, and permit the patient to leave her bed even on the second or third day if she pleases. Even in cases in which a preparatory treatment is necessary in order to render the fistula accessible to the instruments with which the operation is to be performed, I make choice almost exclusively of a rapid preparation, immediately before the operation, while Bozeman, in all these cases, prefers the gradual preparation."

He then gives the details of four cases operated on by himself, and three by Bozeman. In one of the former death occurred from suppurative pyelitis, with impaction of a calculus in one ureter. This condition existed before the operation, and the case is set aside, as Bozeman admitted that death would have followed either operation.

Of the three cases of each category remaining for comparison, Simon's results were: In the first case a small fistula, about as large as a pea, or one-twenty-fifth part of the wound, remained open; in the second, eventual complete cure, a small remaining aperture closing spontaneously; in the third, complete closure, except a small portion which lay beyond the sutures. Bozeman attained a complete cure in his first case; in his second, the whole fistula reopened, and the patient became incurable; and in the third, about four-fifths of the line of approximation were closed. The author therefore claims that his results were both absolutely and relatively better than those of Bozeman.

The particular impediments to success in each of the six cases are then discussed, and may be summarized thus:—In all of Simon's cases the urethra was implicated. In only one case, Bozeman's third, was there very great difficulty on account of the inaccessibility of the fistula, and this difficulty was overcome. In one of Simon's cases the fistula was of unusual size, involving the whole vesico-vaginal septum. Cicatricial

contractions and adhesions of the vagina were hindrances in two of Simon's cases. Proximity of the ureter, which, however, Simon considers no impediment, was a feature in one of Bozeman's cases.

The author's special objections to Bozeman's method are: (1) The use of scissors instead of the knife. In all plastic operations, he says, the scissors should be used only when the knife fails. The crushing effect of even the sharpest scissors must tend decidedly to prevent union. (2) The removal of an unnecessary amount of tissue in paring the edges, particularly in the lateral cul-de-sac, where the peritoneum is liable to be wounded; from the urethral wall, as tending to result in incontinence; and everywhere, if the fistula be large, as adding still more to the tension to be overcome. (3) He claims that Bozeman's method of exposing the parts, although it reveals the fistula more strikingly to the eye, in reality causes their retreat, and thus renders the handling of the instruments much more difficult than in his own method, in which the parts are drawn down to, or even outside the vulva. (4) On account of the lateral expansion of the vagina, all fistulæ, even if longitudinal, have to be brought together in a transverse line. (5) Bozeman's plate suture, while undoubtedly capable of holding the parts in good apposition, is nevertheless difficult to apply; and, on account of the concealment of the sutures by the plate during the process, there can be no certainty that each suture is accurately applied. Moreover, the sutures, being larger but less numerous, do not offer so many points of resistance to the tension; and this resistance is therefore not sufficiently distributed.

The gradual preparatory treatment practiced by Bozeman is recommended to inexperienced operators, since it does not require the skill demanded by the rapid method. It is, however, no more efficient in most cases, many patients cannot endure it, and in some instances it exposes the patient to the danger of inflammation of the vagina, bladder, and pelvic cellular tissue, parametritis, and even pelvic peritonitis. The gradual method is sometimes necessary, however, and, as the result of observation of its employment in Bozeman's hands, Simon sets a higher value upon it now than he did before.

Amputation of the Cervix Uteri [Keilformige Excision der Muttermundslippen mit Bildung von Seitenlappen], (F. A. Kehrer, *Archiv für Gynäkologie*, X Bd., 3 Hft., p. 431.)—After pointing out certain defects in various methods of excision of the cervix, the author lays down the following features as essential to a satisfactory method: (1) Primary union must be ensured, so far as possible, by the formation of broad, thick flaps, formed chiefly of the muscular layer of the cervix, avoiding

isolated gliding of the cervical and vaginal mucous membrane. (2) The closure of the wound must at once stop the bleeding. (3) It should enable us to remove more or less of the cervix, as required. (4) The diseased portion of the cervical mucous membrane having been removed to a sufficient extent, there should be no stenosis of the os uteri.

He details a method which he has devised to meet these requirements, and which he has performed in eighteen cases. With the patient in Sims' position, one of the lips of the os uteri, preferably the anterior, is drawn and held as low down as practicable by means of a hook or a ligature passed through it. In case of fixed uterus, the operation is not applicable. A very short speculum of horn is used. Seizing the posterior lip with a hook passed from within outwards, a piece is cut out from it in the form of a three-sided pyramid, with convex surfaces. The base of this piece, as well as its odd size (*unpaare Seitenflache*), is composed of the cervical mucous membrane, the two incisions extending deep into the parenchyma of the cervix. The upper cervical incisions, to be made first, begin two or three mm. from the lateral angles of the os externum, and run obliquely upwards and towards the median line, where they meet as an acute or right angle. The two lower incisions extend, in outwardly convex lines, to the junction of the vaginal and cervical mucous membranes, meeting at an acute angle in the middle of the lip of the os uteri. At first, these incisions are carried merely through the mucous membrane, their deep portion varying according to the amount of tissue to be removed. The flaps are brought together with sutures, which should stop the bleeding. A little bleeding, however, often continues from the upper end of the wound, which may be checked by an additional suture through the whole thickness of the lip. The sutures, left long, serve to hold the uterus during the excision of the anterior lip, which is done in the same way. The cases for which the method is recommended are: eccentric hypertrophy of the cervix, with marked swelling or ulceration of the cervical mucous membrane; hypertrophy of the cervix, with elongation of the supravaginal portion; simple elongation of the whole vaginal portion, or polypoid lengthening of one lip; and, perhaps, certain cases of cancer.

Removal of a Fibrous Tumor from the Uterus by Traction, with Remarks on the Operation, (Dr. T. A. Emmet, *Am. Jour. Obstet.*, Jan, 1877, p. 24.)—A tumor, extending above the umbilicus, and weighing, after its removal, eight pounds, occurred in a single lady, twenty-eight years old. It did not effect her general health, and, except on one occasion, when there was moderate menorrhagia, the function of menstruation was in no

wise disturbed. The os uteri being found open and the tumor presenting, showing the existence of sufficient healthy uterine tissue to drive the tumor down as successive portions should be removed, ergot was given, and the uterus kept under its influence for five days. As an odor now announced that the tumor was beginning to break down, the operation was undertaken. Failing in an attempt to pass a noose over the tumor with Gooch's canula, by which to make traction, the left index finger was passed as high up as possible behind the mass. The removal, piecemeal, with scissors, was then begun, the soft parts being protected with the finger, and a portion of the tumor drawn into view with a double hook. Although the uterus was compressing the tumor well, the latter did not advance into the vagina as usual, owing to its greater size above the superior strait. The operation was continued through the centre of the tumor until the cut surface was almost beyond reach of the instruments. The introduction of the hand became necessary, and a partial laceration of the perineum was produced. The progress of the operation was now very tedious, and the patient gave signs of approaching exhaustion, but was rallied with hypodermic injections of brandy. She was now placed in Sims' position, and his largest speculum introduced. With a large hook the lower end of the tumor, on the right side, was drawn forwards and a portion of the free surface of the tumor brought into view. Steady traction being made by an assistant, the operator was now enabled to remove with the scissors a large mass which had lodged on the brim of the pelvis. The whole circumference of the os uteri then came into view, and the contractions of the organ forced the remains of the tumor into the vagina as fast as the mass within reach could be removed. At length the attachment was reached, and found to have been reduced to a pedicle no larger than the index finger, the uterus having by its contraction displaced the tumor from its own proper tissue and closed in behind it. Traction being continued, the pedicle was divided between the labia, a partial inversion of the uterus taking place, which was at once reduced. The cervix had already begun to slough, from being compressed between the tumor and the brim of the pelvis. Hot water injections into the uterus caused rapid contraction. Although the patient was now in better condition than at one time during the operation, which lasted two hours and a half, collapse came on at the end of an hour, and she died nine hours and a half after the operation.

The author deprecates any attempt to enucleate these large tumors, as we cannot know how far the uterine tissue may have become involved. If the walls of the uterus have become too thin to contract properly,

death from hemorrhage is likely to occur before the operation is finished; if not, the subsequent danger from blood-poisoning is equally great. So soon, however, as the tumor presents through the dilating os, we have proof that a reasonable amount of uterine muscular tissue remains to aid us, and it becomes a question of judgment as to the time and mode of administering ergot. The operation should be begun when once a portion of the tumor comes to occupy the vagina, as blood-poisoning may come on within a few hours; and, when once begun, the operation should be carried on to completion, as involving the least evil and risk to the patient. When uterine contraction forces the tumor out as fast as can be removed, the operation involves little risk to life. Such contraction is excited by traction on the tumor. A blunt-pointed scissors, curved on the flat, is the preferable instrument. The écraseur is too slow in its action, and does not excite sufficient uterine action. It is best to pass a noose high up around the mass at first, by means of which an assistant should steady the uterus and make traction. The author thinks that, in another case like this, with the patients general health unimpaired, he would prefer a more gradual dilatation, provided the action of the uterus could be controlled. Thus a degree of tolerance might be established, and the shock of the operation lessened. Usually, however, it is advisable to dilate rapidly, and to delay the operation until the tumor begins to break down, so as to secure the greatest possible degree of dilatation and the presence of as much of the tumor as possible in the vagina.

Novel Method of Removal of Intra-Uterine Musculo-Fibrous Tumor, (Mr. G. de G. Griffith, *Obstet. Jour. Great Britain and Ireland*, Feb., 1877, p. 734.)—The tumor, as the result of preparatory treatment, had come to occupy chiefly the vagina, which, as the patient was a virgin, was so filled by it that the operator could not encircle the tumor with a cord. He therefore crushed it with a cephalotribe, and then removed what remained of the growth with the écraseur.

Ovarian Dropsy; Some Points in its Pathology and Treatment. (Dr. Protheroe Smith, *Brit. Med. Jour.*, Sept. 2, 1876, p. 296.)—After expressing his opinion that the frequency of ovarian tumors may be reduced by the practice of depletion for the relief of certain menstrual disorders and symptoms due to plethora, the author states, that, while preparing his patients for oophorectomy, it has been his custom of late to take blood from the arm, not only on account of peritonitic complications, but as a preventive of inflammatory sequelæ after the operation. As regards the operation, the pedicle, if long, is best treated

with a clamp; if of moderate length, by actual cautery; but, if the cyst be close to the uterus, by ligatures. In the after-treatment, he allows little or no blood for the first five or eight days, and combats inflammatory complications by blood-letting or leeches to the uterus.

Two Cases of Ovariectomy or Spaying. (Dr. E. H. Trenholme, *Obstet. Jour. Great Britain and Ireland*, Oct., 1876, p. 425.—In Dr. Trenholme's first case, the removal of the normal ovaries was performed by abdominal incision, for the purpose of inducing artificial menopause in a patient thirty-two years old, the subject of uterine fibroids. The operation accomplished the desired result. Some hemorrhage occurred on two or three occasions, at times when menstruation was due, but it was treated as a hemorrhage, and soon ceased altogether. The author questions the presence of decidual débris in the periodical flow which sometimes takes place after the removal of both ovaries, and thinks that such bleeding should be checked by astringents.

In his second case, the left ovary, somewhat enlarged and prolapsed, was removed by an incision through the posterior wall of the vagina, for the relief of pain. The operation was promptly recovered from, but little if any benefit resulted to the patient.

Vaginal Ovariectomy. (Dr. C. E. Wing, *Boston Med. and Surg. Jour.*, Nov. 2, 1876, p. 516.)—In Dr. Wing's case, a retro-uterine swelling, pressing forwards upon the uterus and backwards upon the rectum, giving rise to painful defecation and marked failure of the general health, was punctured with an aspirator needle, and a diagnosis made of "fluid, old hemorrhagic effusion." A second tapping, a month or more later, was not followed by improvement, but, on the contrary, by what the author considers to have been a mild septicæmia. A thorough evacuation of the contents of the cyst being now thought necessary, Douglas's cul-de-sac was opened from the vagina, and, the finger being passed into it, a small ovarian cyst was distinctly made out. Some loose adhesions were easily broken down with the finger, the opening was enlarged, the cyst seized with the forceps, opened and evacuated, twisted to a diminished size, and pulled through into the vagina. There was no proper pedicle, but the uterus, tipping backwards, allowed the broad ligament, with the Fallopian tube, to come well into the vagina. The operator intended to apply a ligature and cut away the cyst, but at this stage his colleague, Dr. Warner, made a digital examination, and, finding the attachments loose, enucleated the tumor and brought it away. The bleeding soon ceased without ligature, and the uterus fell forwards, drawing the broad ligament back into the abdominal cavity. The wound was closed with

three silk sutures, to prevent protrusion of a coil of small intestine which appeared at the opening, room being left to pass a catheter, should there be any collection to wash out. The woman made a good recovery. On the second and third days some fetid fluid was washed out from the cul-de-sac, and on the fifth day some sloughy tissue. Complete closure of the wound occurred in about a month.

The author agrees with Peaslee, that the operation is of limited applicability, being uncalled for in cases of small tumors which can be pressed up out of the pelvis, since the number of reported cases is too small to warrant the conclusion that it is much less dangerous than abdominal oophorectomy. He admits that a large cyst, even if adherent, may be removed in this way, but thinks that much greater difficulties would be met with than in the ordinary operation. He adduces a case in which the vaginal operation was recently attempted unsuccessfully by Thomas, who, being unable to make an opening into the peritoneum, on account of adhesion of the uterus to the rectum, was obliged, after opening into the rectum, to give up the operation and resort to the abdominal incision. "In another attempt to open the peritoneum from the vagina, at which I was present," says Dr. Wing, "the operator, one of our most distinguished surgeons in the country, failed completely, and was obliged to give up the attempt, although ascites was present, which theoretically should distend Douglas's cul-de-sac."

The author adds the following just remarks *apropos* of certain instances of so-called "normal ovariotomy :" "Anxiety on the part of the specialist to perform great or rare operations whenever a possible chance offers is unfortunate, as nothing tends more to produce a feeling of distrust of the specialty itself among members of the profession."

Suppurating Dermoid Cysts of the Pelvic Cavity. [Kystes Pileux Suppurés de l' Excavation Pelvienne.] (Dr. Bernutz, *Archives de Tocologie*, Oct., 1876, p. 577.)—The author gives full details of a case in which the tumor gave rise to no disturbance until soon after the patient's marriage at the age of twenty-nine (when twenty-four years old she had given birth to an illegitimate child), when it became painful. Soon after parturition, which was perfectly natural, the tumor began to give more trouble. It occupied the right iliac fossa, and extended down into the pelvic cavity, producing anteflexion of the uterus, with displacement of the cervix downwards, backwards, and to the right. The patient was considerably enfeebled, and suffered from fever. An exploratory puncture showed the contents to be purulent. Several unsuccessful attempts were made to secure drainage per vaginam by introducing a long trocar

through the abdominal wall into the cyst, with the intention of pushing its point through into the vagina. It was found, however, that this could not be done without incurring the risk of transfixing* the uterus. The discharge contained cheesy masses, consisting of fatty matter, together with hairs. The cyst having become adherent to the abdominal wall, the puncture was enlarged with a probe-pointed bistoury, so as to admit the finger, which detected the presence of a mass, as large as a hen's egg, made up of fatty matter and hair. With the idea of dissolving this material, the cyst was many times injected with ether. The cyst slowly contracted, but the suppuration was protracted, the pus being fetid at times. Severe constitutional disturbance was produced, and the patient's condition was precarious for upwards of four months, but she finally regained a fair state of health, although, at the date of the report, the fistula had not closed.

Case of Non-Irritable Uterus. (Dr. C. Shriver, *Cincinnati Lancet and Observer*, Sept., 1876, p. 793.)—Dr. Shriver relates the difficulties which he met with in inducing abortion at the third month. The woman had been his "patron for several years," and, "for reasons satisfactory to himself," he undertook the operation.

• • •

RECENT PAPERS.

On the Importance of the Uterine Ebb as a Factor in Pelvic Surgery. (Dr. H. R. Storer, *Ed. Med. Jour.*, Jan., 1877, p. 577).

Dyspareunia. (Dr. J. S. Warren, *Am. Jour. Obstet.*, Jan., 1877, p. 34).

Gonorrhœal Infection in Women [Zur Lehre von der Tripperinfektion beim Weibe.] (H. Fritsch, *Archiv. fur Gynäkologie*, X Bd., 3 Hft., 1876, p. 470).

Perineorrhaphy. [Etude sur la Perineorrhaphie dans les cas de Rupture Complete (suite).] (Dr. J. Hue, *Archiv. de Tocologie*, Oct., 1876, p. 590).

Case of Atresia Ani Vaginalis. (Dr. H. Tuck, *Boston Med. and Surg. Jour.*, Sept. 7, 1876, p. 283).

Three Cases of Imperforate Hymen. (Dr. S. R. Burroughs, *Amer. Practitioner*, Nov., 1876, p. 267).

Vaginismus. [Ein Beitrag zur Lehre vom Vaginismus.] (H. Fritsch, *Archiv fur Gynäkologie*, X Bd., 3 Hft., 1876, p. 547).

Atresia of the Vagina [Ein Fall von Atresia Vaginalis.] (Dohrn, *Archiv fur Gynäkologie*, X Bd., 3 Hft., 1876, p. 544).

Case of Vaginal Cyst. (Dr. D. B. Hunt, *Am. Jour. Obstet.*, Oct., 1876, p. 631).

An Unusual Recto-Vaginal Fistula. (Dr. E. Chenery, *Boston Med. and Surg. Jour.*, Nov. 23, 1876, p. 608).

Complicated Vesico-Urethro-Vaginal Fistula—Restoration of Urethra—Closure of Fistula—Cure. Dr. T. A. Emmet [reported by Dr. J. D. Anway], *Am. Jour. Obstet.*, Jan., 1877, p. 74).

A Case of Supposed Uterine Cancer, in which a Sponge was Retained in the Vagina for Two Years. (Dr. E. W. Jenks, *Chicago Med. Jour. and Examiner*, Sept., 1876, p. 772).

Disease of the Bladder connected with Uterine Displacements. (Dr. B. McE. Emmet. (*Am. Jour. Obstet.*, Oct., 1876, p. 578).

Case of Single Uterus with Double Vagina. (Dr. S. S. Burt, *N. Y. Med. Jour.*, Feb., 1877, p. 177).

Diagnostic Syllabus of the Inflammation commonly met with in the Uterus and Vagina. (Dr. J. H. Etheridge, *Chicago Med. Jour. and Examiner*, Sept., 1876, p. 812).

On So-called Ulceration of the Womb. (Dr. Heywood Smith, *Obstet. Jour. Gt. Brit. and Ire.*, Dec., 1876, p. 604).

Endometritis Polyposa [Fall von Endometritis Decidua Polyposa.] (H. Lewy, *Zeitschr. f. Geburtsh. u. Gynak.*, I Bd., 1 Hft., 1877, p. 22).

Iodized Phenol—a New Uterine Escharotic and Alterative. (Dr. R. Battey, *Am. Practitioner*, Feb., 1877, p. 97).

On the Proper Treatment for Lacerations of the Cervix Uteri. (Dr. T. A. Emmet, *Am. Practitioner*, Jan., 1877, p. 1).

Radiate Discission of the Cervix Uteri [Radiare Discision des Cervix Uteri.] (F. A. Kehrer, *Archiv fur Gynakologie*, X Bd., 3 Hft., 1876, p. 438).

On Prolapse of the Womb from Elongation of the Supra-Vaginal Portion of the Cervix. (Dr. W. Goodell, *Med. and Surg. Reporter*, Jan. 6, 1877, p. 1).

On Prolapse of the Vagina and Uterus. [Klinische Untersuchungen über den Vorfall der Scheide und der Gebarmutter.] (J. Veit, *Zeitschr f. Geburtsh. u. Gynak.*, I Bd., 1 Hft., 1877, p. 144).

The Recent Literature of Versions and Flexions of the Uterus [Resprechung der neueren Arbeiten über die Versionen und Flexionen des Uterus.] (Fritz Benicke, *Zeitschr. f. Geburtsh. u. Gynak.*, I Bd., 1 Hft., 1877, p. 197).

Mechanics of Uterine Displacements. (Dr. A. H. Scott, *Chicago Med. Jour. and Examiner*, Sept., 1876, p. 788).

Atmospheric Distension of the Vagina in the Knee-Chest Posture; is it the Real Factor, or simply an Auxiliary, in the reduction of Retro-Displacements of the Uterus? with general remarks on the Limitations of its Usefulness. (Dr. W. H. Doughty, *Am. Jour. Obstet.*, Oct., 1876, p. 561).

Pneumatic Pressure and the Genu-Pectoral Posture in the Reduction of Uterine Luxations. A reply to Dr. Doughty's "Interrogatory." (Dr. A. S. Campbell, *Amer. Jour. Obstet.*, Jan., 1877, p. 62).

Adenoma of the Uterus [Das Adenom des Uterus.] (Carl Schroeder, *Zeitschr. f. Geburtsh. u. Gynak.*, I Bd., 1 Hft., 1877, p. 189).

The Etiology of Uterine Fibroids [Beiträge zur Aetiologie der Fibroide des Uterus.] (F. Engelmann, *Zeitschr. f. Geburtsh. u. Gynak.*, I Bd., 1 Hft., 1877, p. 130).

A Case of Fibroid Tumor of the Uterus, causing Eclampsia; with remarks on Uterine Fibroids in general, and on the causes of Puerperal and Non-Puerperal Eclampsia. (Dr. B. B. Browne, *Am. Jour. Obstet.*, Jan., 1877, p. 38).

Subperitoneal Fibroid Tumor of the Uterus removed through an incision in the Posterior Wall of the Vagina. (Dr. R. S. Sutton, *Chicago Med. Journal and Examiner*, Dec., 1876, p. 1079).

On the Spontaneous Subsidence of Fibro-Myomata after Delivery [Ueber Spontane Rückbildung von Fibro-Myomata nach der Entbindung.] H. Lohlein, *Zeitschr. f. Geburtsh. u. Gynak.*, I Bd., 1 Hft., 1877, p. 120).

A case of Uterine Fibro-Cystoma. (Dr. F. Staples, *Chicago Medical Journal and Examiner*, Feb., 1877, p. 97).

A Contribution to the Therapeutics of Ovarian Cysts. (Dr. F. Fieber, *Am. Journal Obstet.*, Oct., 1876, p. 598).

Ovarian Cyst Treated by Electrolysis. (Dr. R. Hesse, *Am. Journal Obstet.*, Jan., 1877, p. 78).

Galvano Puncture of a Hydrovarium. (Dr. E. Flies, *N. Y. Medical Journal*, Jan., 1877, p. 23).

Lister's Antiseptic Method in Ovariotomy. (Dr. J. Marion Sims, *Medical Record*, Dec. 9, 1876, p. 792).

A Remarkable Case of Ovariotomy, with Remarks upon the Operation. (Dr. J. F. Heustis, *New Orleans Medical and Surg. Jour.*, Jan., 1877, p. 495).

A Successful Case of Ovariotomy—Tumor Sessile—Cauterization. (Mr. I. Mossop, *Ed. Med. Jour.*, Sept., 1876, p. 238).

A Case of Ovarian Tumor—Ovariotomy—Recovery. (Dr. O. O. Burgess, *Pacific Medical and Surgical Journal*, January, 1877, p. 346).

A Case of Ovarian Cystic Tumor—Ovariotomy—Recovery. (Dr. W. L. McAllister, *Cincinnati Lancet and Observer*, January, 1877, p. 60).

Four Consecutive Cases of Ovariotomy. (Mr. T. W. Haine, *The Lancet*, Sept. 2 and Nov. 25, 1876, pp. 318 and 745).

A Case of Ovariotomy. (Dr. G. Buchanan, *Brit. Med. Jour.*, Dec. 9, 1876, p. 742).

A Case of Ovariotomy. (Dr. E. Y. Chase, *Medical and Surgical Reporter*, Dec. 9, 1876, p. 485).

Successful Case of Ovariotomy. (Drs. A. J. Smith and R. F. Blount, *Am. Practitioner*, Nov., 1876, p. 284).

Ovariotomy in a patient sixty-five years of age, with Complete Recovery. (Dr. C. Richards, *Chicago Med. Jour. and Examiner*, Sept., 1876, p. 769).

Two Cases of Ovariotomy. (Dr. A. R. Jackson, *Chicago Medical Journal and Examiner*, Sept., 1876, p. 779).

Pelvic Lymphadenitis Simulating Phlegmon of the Broad Ligament [Adeno. Lymphite Peri-Uterine simulant un Phlegmon du Ligament Large.] (M. A. Guerin, *Arch. de Gynécologie*, Nov., 1876, p. 664, from *La France Médicale*).

Case of Mammary Cancer. (Dr. R. Battey, *Am. Pract.*, Dec., 1876, p. 331).

Tumor of Breast; Precautionary Ligation of Veins; Removal. [Tumeur Volumineuse du Sein; Ligature Preventive des Veines; Extirpation; Guérison.] (M. D. Molliere, *Lyon Med.*, Jan. 7, 1877).

A New Combination Speculum. (Dr. W. D. Schuyler, *N. Y. Medical Journal*, Oct., 1876, p. 362).

A New Pessary. (Dr. A. T. Woodward, *N. Y. Med. Jour.*, Oct., 1876, p. 366).

A New Intra-Uterine Pessary. (Dr. E. S. Lansing, *Philadelphia Med. Times*, Oct. 14, 1876, p. 5).

Accidents caused by Pessaries [Accidents determinés par des Pessaires.] (M. Notta, *Bull. et Meur. de la Soc. de Chir. de Paris*, Dec. 5, 1876, p. 733).

Gynæcological Contributions from Japan [Gynakologische Mittheilungen aus Japan.] (Dr. A. Wernich, *Archiv für Gynäkologie*, X Bd., 3 Hft., 1876, p. 568).

HOSPITAL RECORDS.

NEW YORK HOSPITAL.

REPORTED BY CHARLES H. KNIGHT, M. D., HOUSE SURGEON.

CALCULUS VESICAE.—MEDIAN LITHOTOMY.—SERVICE OF DR. C. M. ALLIN.

John Walters, æt. 57, Englishman, admitted March 20, 1877. His symptoms began five years ago, at which time he had pain in the hypogastrium and frequent desire to urinate after unusual exertion. For the past eighteen months he has been obliged to pass water every hour or two during both the day and night. The vesical irritability is greatest in damp weather and after sexual intercourse. There was no special impairment in the general health and his habits had always been temperate. He had no suspicion of stone until within a few months.

On admission the stone searcher was introduced, and the presence of a very hard calculus was demonstrated. The urethra admitted easily No. $29\frac{1}{2}$ sound. The examination was followed by no bad symptoms. The urine was examined and found to be acid, and to contain small quantities of pus.

Five days after admission Civiale's lithotrite was introduced and the stone found to measure eighteen millimetres. On the 27th an attempt was made to crush the stone with Civiale's instrument, but crushing was found to be impracticable on account of the hardness of the stone. At this grasping the diameter of the stone measured twenty-five mm.

Perineal lithotomy was then determined upon, and the median operation was the one selected. The patient was accordingly etherized and the operation done by Dr. Allin. The withdrawal of the stone required considerable force, and it was found necessary to make a slight nick with the knife in the anterior margin of the prostate. This was followed by moderate hemorrhage, which, however, was soon checked by means of ice and pressure.

The stone consisted of oxalate of lime, and weighed 140 grs.

The patient passed water through the meatus at 11 P. M. and continued to pass urine at intervals, in this way and by the perineum until the third day, when it ceased to come by the meatus. The patient had a slight chill on the day after the operation, but otherwise had no bad symptoms, the temperature never rising above $100\frac{2}{3}$. The patient took freely of decoction of triticum repens both previous to, and after the operation, with apparent relief of irritability of the bladder.

REMARKS.—The median operation was selected in this case, as the size of the stone seemed to indicate a favorable chance for its easy extraction by this method. With many surgeons the propriety of performing the median operation usually hinges on the size of the calculus. Stones which measure less than 13-16 of an inch (or 20 mm.), in diameter may readily be removed, as the prostatic urethra can easily be stretched to the extent of 20 mm. without any laceration. We are of the opinion that it may be performed with as much safety when the calculus is much larger.

It is now generally admitted that the median operation possesses many obvious advantages over all other methods of perineal lithotomy where the stone is small, and the only objection of consequence now made to the operation is that it is not suitable to stones of large size. The objection carries with it no weight, for it is a simple matter to crush the stone with proper instruments, before its removal.

The main point however in discussing questions of this nature is the mortality of the various operations, and in this respect none of them can compare with the median. If statistics prove anything, they show conclusively that it is by far the safest method. According to Gross,* an avowed champion of the lateral method, "of 2303 cases of lateral lithotomy in the hands of American surgeons 156 or about 1 in 14 died." In the case of median lithotomy among American surgeons† "of 205 cases 9 or 1 in 22.77 died."

CASE OF SUPRAPUBLIC DISLOCATION OF FEMUR.—SERVICE OF DR. ALLIN.

M. M. aet. 62, Ireland, waiter. Admitted March 27th, 1877.

While going up stairs he fell down five or six steps. Can not say how he fell or what part of the body struck first. On admission the left leg was everted, the knee flexed, and the limb shortened $\frac{1}{2}$ in. The head of the femur was found just below and to the inner side of the anterior superior spinous process of the ilium. Attempts at reduction by manipulation, under ether, failed, and on the following day reduction was accomplished by means of extension with compound pulleys. There was some oedema of the leg next day, but not much pain. The legs were kept bandaged together for 24 hours and evaporating lotions applied. Passive motion was made gently on the 2nd of April.

REMARKS.—The preceding case is one of considerable interest on account of its being the rarest of the four usual varieties of dislocation of

*Gross on the Urinary Organs, 3rd edition, 1876, p. 275.

†Ibid. p. 290.

the femur. According to the standard authorities it occurs only once in every twenty cases of luxation of this bone.

In the present case it was found impossible to reduce it by manipulation and this was probably owing to the firmness with which the head of the bone was held by Poupart's ligament, the head being undoubtedly wedged between it and the brim of the pelvis.

UNIVERSITY HOSPITAL, BALTIMORE.

REPORTED BY T. A. ASHBY, M. D., RESIDENT SURGEON.

CALCULUS OF THE URETHRA—SERVICE OF DR. L. MC. L. TIFFANY.

B. F. W. *æt. 32*, occupation a baggage master, had suffered for two years with what he supposed to be a stricture of the urethra. Two weeks before applying for treatment at the hospital his trouble increased to such an extent as to cause great difficulty in the passage of urine. He applied for treatment to the physicians at his home in Penn. An examination was made and the presence of a stone was detected in the urethra just in front of the triangular ligament. Every effort to remove it short of an operation proved useless. The attempted use of catheter produced such inflammation that the passage of urine was entirely prevented and paracentesis was twice performed just above the symphysis, and urine removed.

He was then sent to Baltimore and admitted into this hospital. When reaching the hospital there was great distress from distention, as also a peritonitis from previous use of the aspirator. After a few unsuccessful attempts at the removal of the calculus through the urethra the patient was anaesthetized and an incision made through the perineum into the urethra, through which the calculus was withdrawn. After the removal of the calculus all effort to reach the bladder proved unavailing and it became necessary to use the aspirator a third time.

The patient was placed in bed and one gr. of opium was administered every two hours during the night. On the following morning ten grains of quinine were administered and opium in one grain doses every two hours during the day.

The patient was placed in a hot hip bath the following night, and after remaining in water half an hour was enabled to pass his urine in a small stream through the urethra and incision.

Ten grains of quinine were given again at night, with opium in grain

doses every two or three hours. Hot turpentine stupes were kept over the hypogastrium during the entire night. On the third day the patient was much better and after being placed in a hot hip bath succeeded in passing his urine in a larger stream than the day before. Quinine and opium were continued during the third day, with hot turpentine stupes. Hot baths administered again at bed time. On fourth day after operation patient passed urine without use of hip bath in very small stream, a portion coming through the perineal wound and the remainder through the urethra. Inflammatory symptoms subsided and patient gradually improved so as to be able to return home on the tenth day after the operation. Previous to leaving the hospital every effort at an introduction of a catheter failed, but a small Phillip's whalebone guide was introduced with difficulty. The patient left the hospital before a perfect cure was effected, but so far relieved as to be able to pass urine in a medium sized stream through the penis and perineal wound without great difficulty.

The pathological condition in this case was most probably this; a calculus formed in the urethra behind which existed a stricture. Inflammation resulting from the use of instruments, the orifice of the urethra was entirely closed and every effort at micturition prevented.

This is shown by the size and character of the calculus and the condition of the urethra on either side of the sac in which the stone was nested.

The calculus was about $\frac{1}{4}$ of an inch in length and $\frac{1}{2}$ in diameter, oval in shape and formed of uric acid.

NOTE.—Our review of Dr. Sayre's work on "Orthopedic Surgery and Diseases of the Joints" seems to have called forth considerable discussion, and the parties more immediately interested are inclined to continue the controversy and carry it on upon personal grounds, rather than as a scientific discussion. We are in receipt of many communications, some intended for our editorial ear alone, and others which the authors desire to have published in the ARCHIVES. We think that it would be doing a marked injustice to our readers to protract this matter further, and must therefore decline to receive, for publication, any more communications in reference to the subject. In adopting this course, we are aware that we leave ourselves open to the charge of partiality, especially in reference to Dr. Sayre, who, in his letter published in our March number, declined to be called an associate of Dr. Bauer, on the ground that he had proved him guilty of falsehood. It seems only right that Dr. Bauer should have a hearing when such a grave charge is preferred against him, and we should willingly accord him all the requisite space did we not feel convinced that this point had been settled long since, (vide *New York Med. Jour.*, Nos. 1 and 2, 1869.)—ED.

ARCHIVES OF CLINICAL SURGERY.

VOL. II, No. 2.

MAY, 1877.

Whole No., 11.

ORIGINAL PAPERS.

A LOST ART IN SURGERY.*

BY

A. B. CROSBY, M. D.,

Professor of Anatomy, Bellevue Hospital Medical College.

It was the celebrated humorist, Charles Lamb, who said, on seeing a very dirty man, "If dirt were trumps, what hands you'd hold."

It must be confessed that man is a dirty animal ; and if by reason of water he improves upon his natural state, he deserves commendation therefore. It is true that mere attrition will separate from the surface of the body its effete matter and its worn-out covering—and so man may be in possession of respectable health in spite of his filth. But when we approach the domain of the surgeon, we find that cleanliness is the *sine qua non* of successful surgery.

Filth in wounds means poison, and poison means death. The most extended observation has established the above statement as an aphorism in surgery. I do not hesitate to affirm that, in the great metropolitan hospitals of the world, cleanliness, in the highest and best sense, is almost unknown. I trust that I shall not be deemed impertinent when I assert that perfect cleanliness is a lost art in surgery.

To indicate the way in which this lost art may be restored is the object of the present paper. My method will be historical. I propose to adduce certain clinical facts which have come under my observation at

* This paper was read before the New York County Medical Society a year since, but its publication has been delayed until another year's experience in Bellevue Hospital might confirm its statements. A more extended observation has only reaffirmed its conclusions.

different times and in different places, and then deduce such inferences as these facts will seem to justify.

In the summer of 1861, being the first of our civil war, I was assigned as Division Surgeon to the staff of General Charles P. Stone, then commanding a corps of observation at Poolesville, Maryland. As we were thirty-six miles from Washington, and as the general hospitals in that city were at the time crude and unsatisfactory, I conceived the idea of establishing a Division Hospital on the ground, and so retain both our sick and wounded.

In August, 1861, I made a communication to Surgeon Charles A. Tripler, who was the Medical Director of the army at Washington, submitting my plan for the construction of a hospital, and asking for the necessary lumber, doors, windows, etc., with which to construct it. The plan was approved, my requisitions were endorsed, and the necessary materials furnished. Some enlisted men belonging to the 15th Massachusetts Volunteers, who were skilled carpenters, were detailed as builders, and on the 21st of October, the day on which the battle of Ball's Bluff took place, we were ready to receive the wounded from that ill-fated engagement.

This hospital was built essentially on what is now known as the pavilion plan, although I was at the time ignorant of the action which the Sanitary Commission was taking in the same direction. I have recently learned that the Sanitary Commission made a communication to the government in July, 1861, advocating the use of pavilion hospitals, and in October following—about the time my hospital was completed and occupied—secured an order for the construction of a hospital on the pavilion plan. I have given these details because from them it appears that my hospital was built and occupied before any of those suggested by the Sanitary Commission, and, so far as I know, was the first hospital of the kind erected during the war.

It consisted of a series of one-story buildings, each large enough for a single ward of thirty beds. Each building was made of rough boards, the cracks being battened with strips, and all thoroughly white-washed, inside and out. There was a window at the head of each bed, suitable ventilators, which were always kept open, and a large stove in each ward. The kitchen and offices were in a building by themselves. All these buildings were connected by water sheds, without walls, so that each ward was distinct, and elevated walks were made beneath the sheds. The ground was elevated and dry, and as trenches were dug around each building to receive the droppings from the eaves, the drainage was

perfect. The sinks were at a distance from the hospital, fresh earth being thrown daily over the dejections.

The condition of the wounded brought off from Ball's Bluff was at the outset unfavorable. They were all suffering under the depression of defeat. It was necessary to transport the sufferers from the Virginia shore to Harrison's Island, in the Potomac, on scows, where they received immediate attention. As an attack was apprehended at day-break, the wounded were again moved to the Maryland shore. Some of them were then pushed across the Ohio and Chesapeake Canal, while others were moved by canal boats to Edward's Ferry—but all were obliged to endure several miles of transportation by ambulance over exceptionally rough, rocky roads, the matter being complicated by a heavy rain.

On arriving at the Division Hospital at Poolesville, a uniform plan of treatment was adopted. The sum and substance of the plan was absolute cleanliness. This was enforced by frequent scourings of the wards, and the instant removal of dejections and all effete matter from them. The bedding was changed as often as it was in the slightest degree soiled. A rough wash-house was extemporized, where four men incessantly boiled, washed, and ironed the bedding. The patients bodies were sponged with warm water—those suffering with surgical fever at short intervals.

At that period of the war the common dressing for gunshot wounds was lint, held in place by adhesive strips, by which the wound was soon hermetically sealed, the retention of sloughing tissue and the burroughing of pus being thereby favored. This "whited sepulchre" method of dressing was absolutely interdicted. Every injury was treated as an open wound. A water dressing was applied, which was changed at short intervals, and burned as soon as soiled. All wounds which were offensive were treated with antiseptic and stimulating applications. No wound was drawn together until its surfaces were covered with bright, healthy granulations.

All our patients were fed for the first few days on the richest soups, fresh milk and bread, supplemented afterwards by a thoroughly nutritious mixed diet. The wards were flooded with sunshine and pure air. All these regulations were rigidly enforced, the nurses soon learning that the guard house and starvation were the penalties for any direction. Thus absolute cleanliness, nutritious food, and pure air formed the tripod on which our Division Hospital at Poolesville rested, and to which its excellent results were mainly attributable.

Fortunately, I am inclined to think, our requisitions for drugs

remained unanswered, and we were obliged to content ourselves with a few pounds of copperas—a crude sulphate of iron—obtained at a country store, which, pulverized and mixed with molasses, answered admirably in cases where there was excessive suppuration. We had also opium, cinchona, Epsom salts, and whiskey.

Having thus summarized the history of this hospital, I shall as briefly summarize our results. The whole mortality, including those known to be mortally wounded on admission, and all cases in which operations were performed, both primary and secondary, as well as those where no operation was required, amounted to only ten per cent. Similar results have been attained with such a degree of uniformity in pavilion hospitals that many surgeons and sanitarians have been inclined to affirm that the old-time metropolitan hospitals cannot compete with them, and must therefore give place. It remains for us to see whether the position of these gentlemen is well taken.

The Third Surgical Division in Bellevue Hospital has had a remarkable history during the past eighteen months, which cannot fail to prove both suggestive and instructive. Prior to September, 1874, the four wards of this division were occupied by puerperal cases, and had become infected to such a frightful extent that the patients were all finally transferred to Pavilion Hospitals on Blackwell's Island. The records of the division during the last six months of its occupancy for lying-in purposes, show the following facts. My esteemed colleague, Prof. William T. Lusk, stated that from Jan. 1st to June 11th, 1874, inclusive, out of one hundred and sixty-six lying-in patients, there were thirty-one deaths. A large portion of the survivors suffered from chills, an elevated temperature, a frequent pulse, and abdominal tenderness. In June the patients were all transferred to Blackwell's Island. In September the infected wards were occupied by surgical cases. It was obvious that the puerperal epidemic had left the wards in an unsafe condition for the receipt of open wounds. Consequently, at the request of the commissioners, my colleague, Prof. Doremus, took charge of the disinfecting process. As the method of disinfecting large hospitals has generally been faulty, I take great pleasure in presenting the efficient course pursued in this instance. Under a recent date Dr. Doremus is kind enough to write as follows :

"In the Spring of 1875 the Commissioners of Charities and Corrections of this city requested me to disinfect the surgical wards in the North wing of Bellevue Hospital. In deciding what course to pursue I was influenced by the following considerations :

Although our knowledge of the products of human decomposition in various

diseases is exceedingly limited, we have reasons for believing that they are complex substances, and that hydrogen is one of their essential elements, the compounds of carbon with oxygen or with sulphur being excepted. On this theory, by attacking these emanations, with an element possessed of superior affinities for hydrogen, we can break up these compounds and thus rob them of their virulence. Moreover, as many of these poisonous bodies are gaseous, they are readily absorbed by porous substances, and thus, walls, ceilings, as well as the furniture of hospital wards become magazines of pestilence. To attack these evil spirits successfully, gas must meet gas. Chlorine gas seemed to fulfill these conditions, and as it is easily made and comparatively inexpensive, I determined to test the efficacy of large volumes of said element. It is well known that this gas has an intense affinity for hydrogen. When these two gases are mingled in a flask of colorless glass or collodion and exposed to the bright sunlight or to the electric light, they unite with explosive violence,—even in diffused daylight they unite rapidly, forming hydrochloric acid. Water saturated with chlorine will decompose when placed in the sunbeam; its hydrogen associates with the chlorine, and oxygen gas is set free. When chlorine is presented to sulphureted hydrogen immediate decomposition of the ill odored gas takes place—the superior affinity of the chlorine for the hydrogen causes the sulphur to be deposited in fine, yellow particles, and the doubtful (egg) flavor disappears. If chlorine and arseniureted hydrogen are put together, hydrochloric acid is again formed, arsenic is deposited and this most poisonous gas is rendered inert. One of the lecture experiments at the Bellevue Medical College, is to displace a portion of water in a tall glass jar, with sulphuretted hydrogen gas over the pneumatic trough and another portion of the water with arseniureted hydrogen; on passing up a few bubbles of chlorine, chemical action occurs; the *yellow tersulphide of arsenic* is seen on the sides of the jar and on the surface of the water, owing to the abstraction of the hydrogen by the said chlorine and the releasing of the sulphur and the arsenic in the nascent state. When a paper saturated with oil of turpentine is placed in a jar of chlorine gas, black clouds of carbon appear, accompanied with a dull, red flame, because of the intense affinity of this electro-negative element for the hydrogen of the carbureted hydrogen vapor. The potency of chlorine as a bleaching agent, is doubtless due to its ability to abstract the hydrogen from the coloring principles, either directly or indirectly, by liberating active oxygen from water. In this bleaching process care has to be taken lest the tissue be destroyed; as a rule, bleached goods have less strength than unbleached ones.

Many years since Faraday demonstrated that vaccine virus could be decomposed and thus deprived of its extraordinary powers by the agency of chloride. These few facts demonstrate that we understand the *modus operandi* of this deodorizing and disinfecting element. I refrain from mentioning others lest I prove tedious. Moisture is requisite in order that chlorine prove effective—although all substances contain more or less of water, I determined to fill each ward of the hospital with steam prior to charging it with chlorine. To check the loss of a portion of the gas, through crevices and other apertures, strips of paper were pasted around the windows and doors.

Some ten years ago, at the request of Prof. Lewis A. Sayre, Health Physician to this city, and of Mayor Gunther, with the co-operation of Dr. Swinburne,

Health Officer of the Port of New York, I undertook the disinfection of certain cholera ships. In employing chlorine as one of the purifying agents, I found sheets of lead were most convenient as receptacles for the chemicals used in generating this gas. I turned up an edge of about six inches, after rolling out several feet of the lead, and in these troughs placed the materials, such as the peroxide of manganese and hydrochloric acid, or common salt, manganese and sulphuric acid, I therefore used similar leaden troughs at Bellevue, in which I placed a mixture of peroxide of manganese, common salt, (chloride of sodium) and water, stirring the mass with wooden shovels.

Vessels of sulphuric acid (pots de chambre) were placed around said long troughs ; the floors of the wards were wetted ; steam was turned on until the walls and ceilings were thoroughly moistened, and with four or five assistants we groped our way through the cloudy atmosphere, applied the doses of acid and hastened out of the rooms, twenty-four hours later a second application of acid was made, after stirring the mixtures the wards were again closed for twenty-four hours, and in some instances the gas was allowed thirty-six hours of additional treatment. The windows were then thrown open ; the floors and walls were scrubbed and dried. This ended the purification.

To disinfect the water closets a mixture of about equal weights of manganate of soda and sulphate of magnesia (Epsom salts) was sprinkled in and around the basins at night. In the reaction of these salts the permanganate of soda is one of the products. The ozone liberated effectively deodorized and disinfected the water closets and the discharge pipes. Between two and three tons of chlorine gas were generated in disinfecting the aforesaid surgical wards. Two hundred pounds of the mixture of manganate of soda and sulphate of magnesia were used in the water closets.

Vive la Chimie !

After this thorough disinfection by Dr. Doremus, my distinguished colleague, Dr. James R. Wood, took charge of these four wards, which now constitute the "Third Surgical Division." In the absence of Dr. Crane, one of the surgeons of this division, Dr. Wood has rendered the greater portion of the surgical service since September, 1874, and his results have been so exceptionally good that I have deemed it best to quote him directly with reference to the precautions which he instituted on occupying the wards. I am indebted to Dr. Wood, who writes as follows :

"Having chosen the third floor of the North wing of the hospital for my division, I determined, notwithstanding the wards having been used previously for the lying-in service, to prevent if possible the reappearance of any septic diseases. Wishing to begin under the most favorable of hygienic influences, I directed that all the straw in the beds in the wards should be burned, and the ticks should be well washed in carbolic acid. The bedsteads were also sprinkled and washed in the same material, and then painted. The floors were thoroughly saturated with carbolic

acid, and then scrubbed. The walls also were washed repeatedly with acid water and painted, in order to make the disinfection as complete as possible. Prof. Doremus was requested to generate immense quantities of chlorine gas in the wards, which was accomplished thoroughly. I then gave orders to my staff that under no circumstances should any case of erysipelas, cellulitis, gangrene, ulcers, or burns enter any of the wards. Should any of the above diseases enter the wards without the knowledge of the House Surgeon, he should, on becoming acquainted with the facts, immediately transfer the case to the Pavilion, and have the bed and bedding removed from the ward at once, and thoroughly washed and disinfected. I further ordered that no sponges should be used in the wards, and sheet lint and oakum be used in their places. Balsam Peru was ordered to be placed over wounds, and, in order to prevent the spread of disease by this means, it was decided that each patient should have a separate bottle of balsam, and that brushes should not be used more than once.

The House Surgeon and assistants were directed to take precautions to wash their hands and instruments in carbolized water after dressing unhealthy wounds, and the orderlies and nurses were ordered to keep the patients and beds perfectly clean, and to look after the thorough disinfection of the water closets daily. It was further directed that all wounds, especially amputations, should be irrigated several times daily with carbolic acid water and smeared with balsam Peru, the wounded part being placed on a pillow of oakum, in such a position that drainage should be perfect. Since the wards were occupied for surgical purposes, some eighteen months ago, so perfect have been the disinfective and sanitary regulations, that there has not been, during my service, a single case of pyemia, and only two cases of erysipelas, both occurring where cancerous tumors had been removed."

As I have the honor of being associated with Dr. Wood as one of the surgeons of this division, being at present on duty, I have taken great pains to carry out his suggestions. The results continue to be exceedingly satisfactory, not only in surgical cases where operations have been done, but in a class of compound comminuted fractures, with extensive laceration of the soft parts, which are generally regarded by surgeons as imperatively demanding amputation. In this connection I might quote several cases, the records of which I have, but I will not trespass on the patience of the Society at this time.

In view of the puerperal infection and the grave mortality that were present in these wards during the first half of 1874, I propose to bring

AMPUTATION

NO.	NAME	AGE	SEX	DISEASE	DATE OF OPERATION	LOCATION
1	L. H.	20	M.	Extensive Necrosis of femur of three years standing.	Jan. 23, 1875.	Middle 3d
2	L. D.	25	M.	Compound comminuted fracture of the femur, involving knee-joint.	Sep. 16, 1875.	Upper 3d

AMPUTATION

1	R. W.	45	F.	Comminuted fracture of leg, with compound dislocation of ankle-joint. Tibia resected nine months, resulting in a deformed and useless leg.	Oct. 2, 1875.	
---	-------	----	----	--	---------------	--

AMPUTATION

1	E. K.	45	M.	Compo. fracture of leg, with extensive comminution of both bones.	Oct. 22, 1874.	Upper 3d
2	M. M.	30	M.	Compound fracture of leg, with extensive laceration of soft parts.	Jan. 16, 1875.	Middle 3d
3	P. E.	33	M.	Compound comminuted fracture of leg.	March 24, 1875.	Middle 3d
4	P. G.	40	M.	Compound dislocation of ankle.	March 24, 1875.	Lower 3d
5	A. M.	34	M.	Compound comminuted fracture of leg, involving ankle joint, together with rupture of anterior tibial artery.	Oct. 16, 1875.	Middle 3d
6	T. M.	12	M.	Compound fracture and dislocation of metatarsal bones.	Nov. 13, 1875.	Lower 3d
7	M. Q.	20	F.	Compound fracture of leg, with extensive laceration of soft parts.	Dec. 2, 1875.	Upper 3d
8	O. D.	34	M.	Compound comminuted fracture of leg.	Jan. 12, 1876.	Upper 3d

AMPUTATION

1	J. A.	32	M.	Necrosis of tarsal bones.	Oct. 10, 1874.	
---	-------	----	----	---------------------------	----------------	--

OF THIGH.

METHOD OF OPERATING	RESULT	HIGHEST TEMP.	PULSE	TREATMENT AND REMARKS.
Lateral posterior flap.	Recovery	10th day, 102½	110	Closed for three days then opened. Ligature away on 10th day. No erysipelas.
Lateral Skin flap	Recovery	11th day, 103	108	Ligature away on 20th day. No erysipelas. Small slough on inner flap due to contusion of soft parts. Openly. Irrigation and balsam.

OF KNEE-JOINT.

Lateral skin flap. Patella remaining.	Recovery	4th day, 102½	106	Ligatures away on 19th day. No erysipelas. No abscess. Openly. Irrigation and balsam.
---------------------------------------	----------	------------------	-----	---

OF LEG.

Lateral skin flap.	Recovery	3d day, 103½	112	Ligatures away on 20th day. Openly. Irrigation and balsam.
Circular, with lateral incisions.	Recovery	19th day, 102½	94	Ligatures away on 19th day. Small abscess on spine of tibia. Openly. Irrigation and balsam.
Lateral skin flap.	Recovery	2d day, 103	144	No abscess. Openly. Irrigation and balsam.
Lateral skin flap.	Recovery	29th day, 106½	120	Chill. Abscess over tibia. Closed for a few days, then reopened. Irrigation and balsam after opening.
Lateral skin flaps.	Recovery	6th day, 102½	124	Ligatures away on 14th day. No abscess. No erysipelas. Openly. Irrigation and balsam.
Lateral skin flaps.	Recovery	3d day, 101½	124	Ligatures away on 9th day. No abscess. No erysipelas. Openly. Irrigation and balsam.
Lateral skin flaps.	Recovery	5th day, 102½	114	Ligatures away on 8th day. No abscess. No erysipelas. Openly. Irrigation and balsam.
Lateral skin flap.	Recovery	3d day, 102½	140	No erysipelas. Small abscess. Openly. Irrigation and balsam.

AT ANKLE-JOINT.

Syme's.	Recovery	3d day, 101½	120	Stump was closed. Small abscess and slight sloughing.
---------	----------	-----------------	-----	---

AMPUTATION

NO.	NAME	AGE	SEX	DISEASE.	DATE OF OPERATION.	LOCATION.
1	J. H.	15	M.	Lacerated wound of foot, with compound dislocation of first phalanx of great toe. Plantar surface extensively torn up.	June 9, 1875.	
2	J. M.	27	M.	Lacerated wound of foot, with dislocation of first metatarsal bone. Communition of Phalanges. Plantar surface extensively torn up.	Jan. 11, 1876.	

AMPUTATION

1	J. G.	28	M.	Compound comminuted fracture of fore-arm, involving elbow-joint.	March 29, 1875.	Middle 3d
---	-------	----	----	--	-----------------	-----------

AMPUTATION

1	J. K.	22	M.	Lacerated wound of hand, requiring removal of 2, 3, 4, 5 fingers.	Dec. 19, 1874.	
2	J. D.	13	M.	Lacerated wound of hand, requiring amputation of all the fingers through middle of metacarpus.	June 3, 1875.	
3	T. B.	12	M.	Lacerated wound of hand, requiring amputation of 4th and 5th fingers at carpo-metacarpal articulation.	July 5, 1875.	

RADICAL CURE

1	R. G.	61	M.	Oblique inguinal.	Dec. 5, 1874.	Right side
2	R. C.	60	M.	Oblique inguinal.	Feb. 13, 1875.	Left side
3	C. L.	40	M.	Oblique inguinal.	Feb. 13, 1875.	Left side
4	M. B.	28	M.	Oblique inguinal.	Oct. 30, 1875.	Left side
5	J. K.	30	M.	Oblique inguinal.	Nov. 20, 1875.	Left side
6	J. H.	27	M.	Oblique inguinal.	Nov. 20, 1875.	Right side
7	J. D.	52	M.	Oblique inguinal.	April, 1876.	Left side

OF TOES.

METHOD OF OPERATING	RESULT	HIGHEST TEMP.	PULSE	TREATMENT AND REMARKS
	Recovery			Abdominal decubitus for drainage Irrigation, balsam and oakum.
	Recovery	2d day, 102		No Erysipelas. No Abscess. Abdominal decubitus. Irrigation, balsam and oakum.

OF ARM.

Lateral skin flap.	Recovery	2d day, 102½	120	No erysipelas, abscess or sloughing. Open. Irrigation and balsam.
--------------------	----------	-----------------	-----	---

OF FINGERS.

	Recovery	5th day, 101 1-5		Slight erysipelas on 7th day. Balsam and oakum dressing.
Palmar flap.	Recovery	Normal		Openly. Balsam and oakum dressing. No erysipelas, abscess or sloughing.
	Recovery			Slight erysipelas on 12th day. Small abscess opened on 14th day. Balsam and oakum dressing.

OF HERNIA.

Seton wet in sub-sulphate of iron.	Recovery	4th day, 100½		No peritonitis. Opium.
Wutzer's.	Recovery	4th day, 99½	80	No peritonitis. Opium.
Seton wet in sub-sulphate of iron.	Recovery			No peritonitis. Opium.
Wutzer's.	Recovery	2d day, 100		No peritonitis. Opium.
Wutzer's.	Recovery	8th day, 103		No peritonitis. Opium.
Seton wet in sub-sulphate of iron.	Recovery	7th day, 103		No peritonitis. Opium.
Agnew's.	Recovery	6th day, 100 1-6	76	No peritonitis. Opium.

STRANGULATED

NO.	NAME	AGE	SEX	DISEASE.	DATE OF OPERATION.	LOCATION
1	T. L.	37	M.	Oblique inguinal. 20 years' standing.	Dec. 3, 1874.	Right side
2	J. P.	47	M.	Oblique inguinal. 8 years' standing.	Dec. 7, 1874.	Right side
3	C. T.	40	M.	Oblique inguinal.	Sept. 2, 1874.	Right side
4	S. R.	37	M.	Congenital.	Sept. 13, 1875.	Left side

AMPUTATION

1	K. D.	40	F.	Schirrus cancer.	Oct. 10, 1874.	Right side
2	M. C.	38	F.	Schirrus cancer.	Oct. 31, 1874.	Right side
3	E. F.	47	F.	Schirrus cancer.	Nov. 6, 1875.	Left side
4	S. C.	55	F.	Schirrus cancer.	Nov. 13, 1875.	Right side
5	K. C.	30	F.	Schirrus cancer.	Jan. 2, 1876.	Right side
6	D. B.	44	F.	Schirrus cancer.	March 11, 1876.	Left side
7	K. T.	17	F.	Fibro sarcoma benign.	March 28, 1876.	Left side
8	M. C.	39	F.	Schirrus cancer.	April 13, 1876.	Right side

HERNIA.

METHOD OF OPERATING.	RESULT	HIGHEST TEMP.	PULSE	TREATMENT AND REMARKS.
Sac not opened.	Died	12th day, 100 1-8	96	Signs of strangulation had existed for several days before admission. Abscess. Artificial anus. Patient died of exhaustion two months after operation.
Sac opened.	Died	6th day, 101 1/2	100	Complete strangulation of 24 hours' standing. Abdomen tender and tympanitic on admission. Died 8th day of peritonitis.
Sac opened.	Died			Strangulation of two days duration. Marked peritonitis on admission. The gut was gangrenous, became ruptured, and was not reduced. Died two days after operation.
Sac opened.	Died	3d day, 104		Strangulation of 10 hours' duration. Died on 17th day of acute uræmia. External wound healed, and internal abdominal ring completely closed. No peritonitis.

OF BREAST.

	Died			Erysipelas invaded the wound on the 10th day, and gradually extended until the arm and back were involved. An abscess in the axilla was opened on the 11th day, and on the 4th of Nov. diarrhoea set in, which resisted all treatment. Patient died of exhaustion. Patient was removed to a medical ward.
	Recovery			No erysipelas.
	Recovery	3d day, 101 1-5	96	No erysipelas.
	Recovery			No erysipelas.
	Recovery	2d day, 102 1-4	112	No erysipelas.
	Recovery	2d day, 101	112	No erysipelas.
	Recovery	3d day, 101	86	No erysipelas.
	Recovery	3d day, 101	112	No erysipelas.

TREPH

NO.	NAME	AGE	SEX	DISEASE.	DATE OF OPERATION	LOCATION
1	J. P.	47	M.	Comp. com. fracture of frontal bone.	Dec. 3, 1874.	Right side
2	F. R.	9	M.	Comp. depressed fracture of frontal bone.	Jan. 5, 1875.	Right side
3	A. G.	16	M.	Pistol shot wound. Parietal bone.	July 1, 1875.	Right side
4	J. R.	34	M.	Comp. depressed fracture of parietal bone. Base of skull involved in fracture.	Nov. 17, 1875	Left side
5	A. S.	50	M.	Comp. com. depressed fracture of frontal bone, and fracture of base.	March 4, 1876.	Right side
6	A. L.	5	F.	Pistol shot wound of frontal bone.	Aug. 7, 1875.	Right side
7	J. P.	50	M.	Syphilitic necrosis of parietal bone.	Nov. 21, 1875.	Right side

EXTERNAL PERINEAL

1	W. H.	34	M.	Stricture of urethra. Perineum infiltrated. Bladder greatly distended.	Feb. 26, 1875.
2	W. C.	20	M.	Tight stricture of urethra, complicated with fistula.	Dec. 11, 1875.
3			M.	Tight stricture of urethra.	Dec. 11, 1875.

INING.

METHOD OF OPERATING	RESULT	HIGHEST TEMP.	PULSE	TREATMENT AND REMARKS.
	Died			Hemorrhage from nose. Severe shock. Fragments elevated and removed. Patient never rallied. Died 20 hours after.
	Recovery	5th day, 107	108	Membranes not injured. Fragments elevated and removed. Out of bed on 24th day. No meningitis.
	Died	12th day, 105½	135	Membranes and cerebral tissue lacerated. Meningitis began on 5th day. Hernia cerebri appeared within 6 days. Died 14th day.
	Died	8th day, 103	96	Membranes not lacerated. Meningitis 20th day. Softening. Died 41 days after operation.
	Died	2d day, 107		Hemorrhage from nose. Cerebral tissue lost. Died 2d day.
	Recovery	105	160	Slight shock. Fragments removed at a depth of 1 inch. 3 drachms of brain tissue lost. Ball probed for at depth of 2½ ins.; not found. Hemiplegia appeared on 21st day. Hernia appeared on 10th day; increased for 3 months; then, under use of permanganate of potash for 2 months disappeared. 19th day serous discharge from patient's ear.
	Died	2d day, 103	120	Necrosed portion removed by an elevator. Hemiplegia 8th day. Died 11th day. Meningitis and cerebral abscess.

URETHOTOMY.

Without a guide.	Died			No instrument could be introduced into the bladder. Patient died 6 days after of peritonitis. Post mortem revealed extensive infiltration under parietal layer of peritoneum.
With a guide.	Recovery	3d day, 103½		No catheter introduced to keep urethra open. Sounds introduced after 2d day. No erysipelas or abscess. When discharged patient passed a good stream.
With a guide.	Died			Wound closed. Patient was attacked within 24 hours after operation with acute oedema and congestion of lungs. Post mortem revealed fatty degeneration of heart.

NASAL

NO.	NAME	AGE	SEX	DISEASE	DATE OF OPERATION	LOCATION
1	W. A.	22	M.	Nasal polypus, involving antrum and nasal cavity ; projecting through anterior nares in front, and pressing down the velum pendulum palati behind.	Jan. 23, 1876.	Right side

EXCISION

1	F. S.	17	M.	Necrosis of fibula.	Jan 22, 1876.	Right side
---	-------	----	----	---------------------	---------------	------------

LITHO

1	T. P.	55	M.	Stone in bladder.	Oct. 13. 1874.	Bidateral
---	-------	----	----	-------------------	----------------	-----------

REMOVAL OF

1	R. W.	45	M.	Cancer of inferior maxilla.	Oct. 17, 1874.	Right side
---	-------	----	----	-----------------------------	----------------	------------

RESECT

1	S. J.	21	F.	Caries of elbow-joint.	May 28, 1875.	Right side
2	J. W.	29	M.	Caries of knee-joint.	Oct. 9, 1875.	Right side

POLYPUS.

METHOD OF OPERATING.	RESULT	HIGHEST TEMP.	PULSE	TREATMENT AND REMARKS
	Recovery	2d day, 102 $\frac{3}{4}$	110	Had been removed from antrum once before. The tumor was torn from cribriform plate of ethmoid bone, and liq. ferri sub sulphatis applied daily to raw surface until April 1, when he was discharged cured.

OF FIBULA.

	Recovery	2d day, 102 $\frac{1}{2}$		The thickened periosteum was elevated, and the entire fibula removed, except the head and malleolus. Wound was dressed with lint and balsam. Patient was discharged the middle of April with a new fibula.
--	----------	------------------------------	--	--

TOMY.

	Died			Small amount of blood lost. Reacted well. Died 30 hours after operation of acute uremia. Post mortem revealed acute and chronic diffuse nephritis, with extensive cystic degeneration.
--	------	--	--	--

INFERIOR MAXILLA.

	Died	2d day, 102 $\frac{3}{4}$		Difficulty of breathing 7th day. Laryngotomy. Extensive erysipelas set in on 10th day, and patient died of exhaustion 14 days after operation.
--	------	------------------------------	--	--

TIONS.

	Recovery	2d day, 103 $\frac{1}{4}$	104	The exsection was sub-periosteal. The articular surfaces were removed, and the wound allowed to remain open. Went to garden 18th day. No erysipelas. Patient has almost perfect use of elbow.
Anterior flap. Patella left.	Recovery	10th day, 103	120	No erysipelas. Patient was walking with a posterior splint 10 months after the operation.

out in contrast the surgical results obtained in the same wards since September, 1874. My House Surgeon, Dr. H. M. Silver, whom I especially desire to commend for his efficient and conscientious discharge of duty, has, at my request, tabulated, from the reports of the division, a history of the surgical cases in which operations have been done since the disinfection of the wards and the establishment of absolute cleanliness, and the results of the same.

From this table it appears there were two amputations of the thigh high up, both of which recovered. The average temperature was $102\frac{1}{4}$; pulse, 110. No abscess or erysipelas appeared in either case. One was treated openly, and the other in the same way after the first two days. There was an amputation at the knee-joint that had little more disturbance than a simple amputation of a finger. The highest temperature was $102\frac{1}{2}$; pulse, 106; no erysipelas, no abscess, and the patient made a rapid recovery. There were eight cases of amputation of the leg, all of which recovered. They were all treated openly, except one in which the temperature was up to $106\frac{1}{2}$; the average temperature was $103\frac{1}{4}$. In only two cases did abscesses form, and they were very small. No erysipelas occurred in any of the stumps. There were two amputations of the toes, with extensive laceration of the plantar surface of the foot. There was little or no constitutional disturbance, the drainage being perfect, and recovery rapid. There was one amputation of the arm, followed by recovery. The temperature was $102\frac{1}{2}$; pulse, 120; but no erysipelas, abscess, nor sloughing. There were three cases of amputation of several fingers, involving either the carpus or metacarpus, all of which recovered without constitutional disturbance. Thus it appears there were seventeen consecutive amputations, twelve major and five minor, *all* of which recovered. These results are most encouraging when we contrast them with the statistics of mortality of Sir James Y. Simpson, as derived from a record of five thousand amputations.

The table further shows that there were seven operations for the radical cure of hernia, all of which recovered. There was no peritonitis in these cases, and all were treated with opium. There were four operations for strangulated hernia. Three of the cases had peritonitis when admitted, and all died within a few days. The fourth case recovered from the hernia, but died subsequently from uraemia.

There were eight amputations of the breast. Seven recovered with slight disturbance; the remaining one died from erysipelas and exhaustion. There were seven cases of trephining. Two recovered; five died from meningitis, and were suffering from compression on admission.

There were three cases of external perineal urethrotomy. One recovered, two died; one from extensive urinary infiltration, and the other from acute œdema and congestion of the lungs. There was an operation for the removal of the superior maxilla, and one for the excision of the fibula, both of which recovered with low temperature. There was a case of lithotomy which died of acute uræmia thirty hours after the operation, and an operation for the removal of the inferior maxilla, which died from erysipelas. Finally there were two resections—one of the knee and one of the elbow—both of which recovered, the temperature not going above 103.

From the foregoing results it appears that sepsis has gained no habitat in these wards since they were disinfected, and since absolute cleanliness has been enforced.

In addition to these cases under the service of Dr. Wood, I have added an amputation in the upper third of the thigh, a radical operation for hernia, and a range of compound injuries, all of which have recovered.

But I am able to adduce still further evidence, derived from another quarter, but showing the same facts. In the Long Island College Hospital, of which I formerly had the honor of being one of the surgeons, the surgical wards became infected, and the history of the infection, together with its removal, is, to my mind, extremely significant. My friend and former colleague, Professor Jarvis S. Wight, at my request, has kindly furnished me the following statement. He writes :

"During the spring of 1873 pyemia and septicemia prevailed in the Long Island College Hospital. I was requested to disinfect the surgical wards. The following plan was submitted to and approved by the committee and carried out under my personal supervision, viz. : Some of the bedding and appliances was burned, while the rest was thoroughly washed in a strong solution of crude carbolic acid. The floors and walls of the ward were washed with the same carbolic solution, and then the wards were fumigated for three days with the vapor of carbolic acid and vinegar, and after that fully ventilated. When the patients were put into the ward again, pyemia and septicemia continued.

"Later in the season I came on duty in the surgical wards, and found pyemia and septicemia still prevailing. I said to myself, what can I do to eradicate this great trouble? I remembered the things that had been done, and then thought of the things that had not been done, and found I had overlooked the surgeon, the interne, the nurse and the patient; and for the first time realized that I had used an antiseptic instead of a disinfectant. I had preserved the proto-mycete and not destroyed it.

"Now remembering the well known affinity of chlorine for the hydrogen of infection and sepsis, I procured a bottle of chlorinated soda and washed my hands in it; then instructed the interne to do the same thing. The nurses were ordered to wash their hands in a solution of chlorinated soda both before and after dressing each wound. The wounds were washed with a weak solution of chlorine, and lightly dressed with sweet oil or carbolized oil, or at times with a little oakum. The *hands* of the *surgeon*, the *interne* and the *nurses* were *kept clean*. *Clean* hands, *clean* wounds, *clean* sponges, *clean* dressings, and *clean everything* were the order of the day. Disinfection and cleanliness were scrupulously observed before, during, and after operations.

"In two weeks' time there was a marked diminution of infection and sepsis, and in little more time it was the remarkable result that the foe had gone to parts unknown, and has never returned, for from that day to this a bottle of liquor sodae chlorinatae stands upon the table of each surgical ward, ready for constant and daily use, a standing monument over the grave of proto-mycete.

"I often think of what I did to banish pyemia and septicemia, and how I failed; and I also think of what more I did, and am gratified by the remarkable results. And now will it turn out, after all the agitation, that tents are no better than large hospitals well provided with sunlight, fresh air, disinfection and cleanliness? Of a truth wisdom is a tardy guest."

Such facts as these plead with mute eloquence for the restoration to surgery of the lost art of *absolute cleanliness*. It is not enough that the ward and bed are clean, but, in the language of Prof. Wight, we must have 'clean everything.'

Prof. Lusk, who observed the puerperal epidemic at Bellevue, was of the opinion that the transmission of the disease was through the attendants. I am aware that some may aver that puerperal fever can not be eradicated from wards once infected. Dr. Lusk, in an admirable paper entitled "The Genesis of an Epidemic of Puerperal Fever," has given a summary of the labors of Winckel in the lying-in institution of Dresden, which shows conclusively that *absolute* cleanliness may even here be king. In writing of this institution Dr. Lusk says:

"In the year 1872 there were 991 confinements and 52 deaths, a rate somewhat exceeding 5 per cent. During the first nine months the death rate was 6.5 per cent, whereas it fell in the succeeding three months to 2.8 per cent. This favorable change was not due to the workings of a special grace, but to the energetic measures inaugurated by Winckel,

who assumed the control in October, 1872. These measures were in substance as follows: The locality of the confinement ward was changed. Every patient was continued upon the bed in which she was confined. When removed to an adjoining ward the bed was transported with her. Each ward containing puerperal patients was emptied once a year, and kept vacated from three to four weeks. A distant wing of the hospital was set apart for erysipelatous and other cases requiring to be separated from those who were in a normal state. An additional nurse relieved the midwife in attendance upon confinement cases from all charge of the puerperal patients. To determine the carriers of infection, only one female pupil at a time was allowed to take charge of the confinements. So soon as a single case of fever occurred among the patients delivered by her, she was at once prevented from examining either pregnant or parturient women. Similar regulations were enforced in the case of the medical attendants.

"In the year 1873 the month of January began badly. From the 1st to the 9th inclusive 26 patients were confined. All without exception were taken ill, and five, or 19 per cent., died. This formidable state of affairs was coincident with a change in the staff of nurses; whereupon the following additional orders were issued: Examinations of parturient women to be forbidden to all those who had previously been in the habit of making them. Removal of the midwife in charge of the labor cases. The pupils and midwives were forbidden to wash the genitalia of puerperal women, but the latter were compelled to perform their own ablutions. All the instruments and apparatus in the lying-in ward were either destroyed or subjected to a white heat. Each patient was provided with her own catheter and injection tube. The temperatures were taken in the axilla in place of the vagina. The ulcerations about the vulva and vagina were touched with the liq. fer. perchlorid. This duty was performed by Winckel himself.

"As a result of the enforcement of these rules, from the 16th of January to the 7th of July, out of 510 births there were but 3 deaths. But of these three one was due to rupture of the uterus, one to nephritis, and one only, or 0.2 per cent., took place from metria, a result scarcely possible in a similar number of confinements among the poorer classes in their homes."

These facts and others which I have quoted are extremely significant, and need little from me in the way of comment. It will be observed that I have dealt only with well established clinical facts. Concerning the germ theory of Pasteur, the doctrine of microscopic fungi and algae,

the micrococcic, the bacterian and coccoglian hypotheses, together with the proto-mycetian ghoul—concerning all these I have held my peace. Not that these various ingenious theories do not possess a transcendental sweetness for the scientific mind, but because there are those who disbelieve them. But however we may dispute in regard to the genesis of sepsis, the clinical facts which I have adduced conclusively prove certain propositions.

First.—Theoretically and in the vast majority of cases *de facto* sepsis can be prevented by an absolute and comprehensive attention to the laws of cleanliness.

Second.—Given that sepsis has occurred in a given case, absolute cleanliness will prevent its extension to other cases, and will stamp it out. Cleanliness is then the lost art which we are to restore to surgery. The success of Mr. Lister with his so called antiseptic method is known the world over. But all observers agree that Mr. Lister's method, independent of carbolic acid, involves an attention to the details of cleanliness almost miraculous, and his results correspond. In fact, Mr. Lister's method has been adopted by others with a substitution of pure water in the place of carbolic acid, and again God-given cleanliness has won the crown. I think then I am justified in saying that sepsis in a hospital is a crime. And as one bad man in a neighborhood may infect many others, so a little leaven of sepsis in a ward will soon leaven the whole lump. And as the statute law demands the execution of the criminal, so the sanitary law demands the destruction of the septic poison. The statute law is designed and undoubtedly does repress crime, and so sanitary law is especially valuable in the way of prophylaxis.

An observance of all the laws of absolute cleanliness about wounds is the great prophylactic against sepsis. Carbolic acid, used in a weak form freely, certainly possesses a remarkable power in preventing putrefactive changes, but putrefaction once having occurred, it is far inferior to permanganate of potash, the chlorinated washes, and other agents, which by rapid chemical changes, immediately destroy both poison and odor.

Sanitarians have been disappointed that hitherto the thorough disinfection of wards and beds has not stayed the fatal course of sepsis. But these gentlemen have overlooked the fact that such disinfection is only one product among many that go to make up the sum of absolute cleanliness. This, together with thorough disinfection of nurses, internes, surgeons, and all appliances about the patient, form a chain which is worthless if one link is missing. I esteem the disinfection of wards and

beds of the utmost importance, but they are useless if all other details of cleanliness are not enforced at the same time.

Dr. Doremus disinfected all the wards at Bellevue with chlorine, but, aside from the Third Surgical Division, I cannot learn that any extraordinary precautions with reference to cleanliness were at the same time enjoined. I have verbally interrogated the distinguished surgeons who are serving at present on the other divisions as to whether the mortality has been greater or less than before the disinfection. Without reference to the written records of the hospital, these gentlemen have given me their general impressions. Dr. Sands says he thinks the mortality has on the whole been less, although he is not certain, as there have been as many cases of as grave a type as before. Dr. Mason makes essentially the same statement as Dr. Sands. Dr. Hamilton does not admit that his wards have ever been infected, and has observed no material changes in the mortality of his cases.

These statements are of comparatively negative value, for the most intelligent experience goes to show that clean wards and clean beds, desirable as they are, are not alone sufficient to insure the best surgical results. We are beginning to learn that "evil communications" corrupt good surgery. Every possible channel of conveyance from one wound to another must be hermetically sealed, or "original sin" will certainly crop out.

In the early part of this paper I referred to my own most satisfactory results in connection with a pavilion hospital, and the advocates of this form of hospital claim that it should take the place of large hospitals. I admit that the pavilion is inexpensive, is isolated, can be destroyed when infected, and gives excellent results. Now I suspect that these results are largely due to the fact that a single ward building is more likely to be kept absolutely clean than a great hospital, just as a single room shanty can be kept thoroughly clean much easier than a palace. But when the advocates of the pavilion plan assert that great metropolitan hospitals must inevitably in time become charged with the poison of pyemia and septicemia, beyond the possibility of relief, save by fire or tearing down the structure, they take a position which the facts cited in this paper show to be false.

I do not hesitate to affirm that any old infected hospital can be entirely disinfected, that there can be no crevice or interstice in such a structure in which septic poison lurks which may not be dislodged and destroyed by being brought in contact with a suitable chemical agent. To generate chlorine in saucers in such wards, or simply to hang up

napkins wet in disinfectants, is about as efficient as the Pope's bull against the comet. But if chlorine is generated on the scale practiced by Dr. Doremus at Bellevue, in wards tightly closed for some days, the immense volume of gas and its expansive force will cause it to permeate every crack and crevice beyond the limits of any poison lodged therein. When we come to the disinfection of wards we want not a shower, but a deluge.

But if this lost art of cleanliness is to be restored, how is it to be accomplished? The moral accountability for the disastrous results likely to follow the want of cleanly precautions in wards, seems to me to rest on the surgeon himself. It is for him, reverently realizing the functions of his high office, to point out the way. To accomplish the desired end, the exact duties in this regard, of surgeons, internes and nurses should be definitely enjoined. The surgeon should then hold his interne to a rigid daily accountability, and he in turn should narrowly watch the nurses. All causes for complaint of neglected duties to be instantly reported to the surgeon, and if not within his province to correct, to be reported by him to the hospital authorities. These details have seemed to me so absolutely essential, that I think they should be printed on cards which should be nailed on every door in the wards, and a copy furnished to every attendant connected with the ward for his instruction and guidance. As, however, the sum of these regulations has been expressed, I shall not weary the Society with them, simply adding that I have divided them into four sections.

First.—Regulations to be observed by all persons in common having any official connection with the ward.

Second.—Regulations for the guidance of internes.

Third.—Regulations for the guidance of nurses.

Fourth.—Regulations with reference to general cleanliness, designed for the head of the hospital.

And so finally we have reaffirmed the adage that "cleanliness is next to Godliness," and this, too, in the largest and best sense is *health*.

FIBROUS TUMOR OF THE UTERUS EXPELLED PIECEMEAL
BY ERGOT.

BY

WILLIAM H. BYFORD, M. D.,

Professor of Obstetrics and Diseases of Women and Children in the Chicago Medical College.

Mrs. L. D. M., forty-seven years of age, called on me Sept. 20th, 1876, with the following history. She had been the subject of severe hemorrhage, leucorrhœa, pains in the region of the uterus, and general

nervous prostration for the past two or three years.

I found upon examination a large fibrous tumor of the uterus, which extended to within two inches of the umbilicus, filling up the hypogastric region, and extending to the ilium on the left side. The uterine cavity admitted the sound fully five inches. The contour of the tumor was globose and regular, and admitted of considerable motion. Her great apprehension made the patient urgently demand some energetic measure to get rid of the tumor. I thought it another very favorable case upon which to try the expulsive influence of ergot, and prescribed Squibb's fluid extract.

She began at once to take 30 drops of that preparation, three times a day, and was to gradually increase the dose to one drachm. At first it had no perceptible effect. In a few days, however, she experienced great pains, and soon the suffering from them made it necessary to omit the medicine for several days at a time. In spite of this disagreeable effect, she was urged to resume it in the smaller doses, and again increase it until it became intolerable. She courageously continued the medicine in this way until the 13th of January, 1877, when the tumor began to break up and be discharged.

I will here give a copy of the letter in which this plucky woman describes the process by which she was freed from the tumor. She says:

"I think I wrote you one week ago to day (Jan. 20th). At that time the tumor was passing. It continued to do so until Friday (the 26th of Jan.), when I think the last of it was expelled. To day I have expressed to you a portion of the last that came. I think the whole that came with the portion I sent you would weigh one and a half pounds. I do not believe a two quart can would hold it all if the whole of it had been preserved. It commenced to come a week ago last Saturday (Jan. 13th), and from Saturday evening to Sunday morning there was a pint or more. After this the stench was so disagreeable that we could not cleanse it; consequently, we threw it away. Wednesday and Thursday it seemed to be in one continuous mass. I can't better describe it than to say that it came like sausage-meat from a stuffer. I would cut off about four inches a day; that is on Wednesday and Thursday. Friday morning (the 26th of Jan.) the last portion of it came away. There is now considerable discharge and a good deal of pain, and my appetite is poor.

"During my sufferings I could not take the medicine you prescribed; the valerian makes me so sick. Yesterday morning I had another attack. It took me all at once. It appeared to be in the womb at

first, and from there it extended to the bowels, as though a knife were cutting me. During the night, if I would cough or move in my sleep, I could not help screaming, there would be such lancinating pains. I am so tender this morning I can't bear anything to touch me.

"I am afraid of this bowel difficulty. I know it is gas, but do not know how to get rid of it. I attempted to use injections of castile soap and tepid water, to cleanse, but it caused pain. The os or neck of the womb is very sensitive. Saturday morning my bowels [the abdominal muscles] were drawn down tight to my back-bone, but Sunday and to day I am bloated, owing to this gas. There are times I have a little fever, then again I sweat excessively."

In the few last sentences of this letter we see allusion to symptoms that must have arisen from septicemia, the result no doubt of absorption of some of the putrid fluids flowing from the decomposed tumor while occupying the uterus and vagina.

The above description, although not elegant, is very graphic, and the more interesting because it comes from the suffering patient.

In a letter dated March 29th, 1877, she says. "You remember when I last wrote I was menstruating freely, and had been for a week. I took the ergot as you directed, and it checked up. In five weeks my courses returned, lasting only two days. During the interval there has been some discharge of a white, glairy mucous. I have gained flesh, appetite is excellent, and my friends think I am doing splendidly."

The frequency with which the persistent use of ergot is followed by the disintegration and expulsion of fibrous tumors of the uterus, is an interesting if not a new item in the treatment of these morbid growths. In a certain class of these tumors we may reasonably expect this event. This is the fourth case that has come under my observation within the last three years in which a fibrous tumor has been thus summarily disposed of.

In the intramural tumor, where the neoplasm is situated so that the greater portion of the muscular fibres surrounding it lies outside, the persistent use of ergot, if it causes contraction, will be very likely to effect its expulsion. I think the process may be explained in this way, viz.: When all the fibres of the uterus are acting with equal energy, the thicker and stronger external stratum will overcome the thinner and weaker internal layer of fibres, and press the tumor toward the uterine cavity. The frequent and continued repetition of this antagonism must soon impair the nutrition of the overpowered and yielding fibres, and finally destroy their integrity, causing either absorption or destructive

inflammation in them, either of which will sooner or later permit of their rupture. After this much is accomplished, the expulsion of the mass will necessarily follow.

I would further call attention to the fact that the concentric action of the whole fibrous structure of the uterus is the most efficient, if not the only factor in the process of disintegration and expulsion of the tumor.

A question of some importance is the possible disastrous effects of ergot in cases where the tumor is situated nearer the peritoneum than to the mucous membrane. If the thicker and stronger stratum of fibres is between the uterine cavity and the tumor, why may not the tumor be disintegrated, and, after rupture of the peritoneal layer of fibres, be impelled into the peritoneal cavity, and cause death from septic inflammation in that cavity? The answer is, that after the tumor is extruded to a certain extent, the inner fibres, by virtue of the concentric direction of their contractions, exert their force from, instead of toward, the tumor. In this way the nutrition of the tumor is diminished, its growth checked, and a tendency given to the more gradual degeneration which results in induration, and, perhaps, calcareous degeneration.

I see no reason to doubt that, with a proper consideration of each case as it presents itself for examination and treatment, we shall generally be able in the near future to select with considerable accuracy those in which the success of the treatment instituted to cause the destruction and discharge of these tumors can be predicted with a reasonable degree of assurance.

A CASE OF SALIVARY CALCULUS.

BY
RUDOLF TAUSZKY, M. D., NEW YORK.

Mary S. 38 years of age, unmarried, presented herself at my office, complaining that, on account of a swelling under her tongue, which has been growing larger for a year, she had considerable difficulty in mastication and speech, besides being annoyed by a constant flow of saliva. She first noticed her trouble about 18 months ago, but paid no particular attention to it up to the time it commenced to grow larger. The patient had always enjoyed good health, with the exception that at times she was constipated and her appetite was poor. Upon examination I found a tumor, of the size of a chestnut, occupying the left sublingual space on the floor of the mouth, not connected with the frenulum linguae, covered by mucous membrane, to which it was not adherent; neither

was it attached to the underlying tissues. Its consistency was tense and hard, and, when moved, gave her no pain. It was evident that I had to deal with a cyst filled with some consolidated material, proved to be such by its hardness, the treatment of which could be effected only by removing the imbedded mass by the knife or scissors, and causing the cyst walls to be obliterated by adhesive inflammation, or by removing the cyst with its contents.

With the kind assistance of my friend, Dr. Goodwillie, of this city, who took a wax cast of the tumor before the operation, I made a longitudinal incision through the covering mucous membrane and the cyst wall, and, by the aid of the forceps, removed a calculus of the size above mentioned. The cavity I filled with lint, soaked in a one per cent. solution of carbolic acid, and sent the patient home. The dressing was renewed in a few days, and left until a slight inflammation ensued, when it was entirely removed, and the wound allowed to heal from the bottom by granulation. During the few days intervening between the operation and the closing up of the wound, a weak solution of permanganate of potash was used as a mouth wash every hour or two, and the bowels were kept open by a mild laxative. The concretion which was removed proved upon examination to have been composed of phosphate of lime.

As neither Dr. Goodwillie nor I had ever seen any similar case, either in our own practice or in that of others, I inquired of some of my professional friends whether they had met with a similar affection, and all of them but one stated to me that they had never seen one. Dr. Charles Heitzmann, of this city, had never met with a similar case. Dr. J. Solis Cohen, of Philadelphia, to whom I mentioned it, had a similar experience. I looked up Erichsen's Treatise on Surgery, and found not a word about it. Several other gentlemen, who had seen a number of ranulae, had never found a similar calcareous concretion. It is the rarity of the occurrence of the affection herein referred to which induced me to publish it. Dr. Clinton Wagner related to me two similar cases. One he saw in Dr. Prosser James' clinic in London, (the concrement was exhibited to the London Medical Society), the other occurred in his practice while surgeon in the United States Army, and is published in *Circular No. 3, War Department, Surgeon General's Office, Washington, D. C., Aug. 11, 1871, page 246.* Dr. Wagner says: "I transmit a salivary calculus, which I hope will be, on account of its extraordinary size, an acceptable offering to the collections of the Army Medical Museum. I removed the stone in Dec., 1870, from the sublingual gland of a laboring man. It blocked up the orifice of the duct of

Bartholini at its junction with the Whartonian duct. From the man's statement I inferred that the concretion had been about three years in forming. . . . The powder scraped off did not effervesce with hydrochloric acid. With solution of molybdate of ammonia it gave the characteristic reaction of phosphoric acid, and a white precipitate with oxalate of ammonia. The concretion would seem to be composed mainly of phosphate of lime and of organic matter."

The best description of salivary calculi may be found in Fairlie Clarke's excellent treatise on the Diseases of the Tongue, London, 1872.

Prof. Hyrtl, in his "Handbuch der Topographischen Anatomie, Wien, 1865," says: "If the occurrence of *bursæ mucosæ* under the tongue, described by Fleischmann, and recently by Patri, should prove to be a normal and constant one"—then there can be no doubt today about the seat of the so called ranula. To seek its origin in an occlusion of the duct of Wharton is so opposed to all our experience that it must be abandoned as untenable. At first sight we could assign no plausible reason why it should not thus originate. The so called dacryo cysto-blennostasis proves its possibility. But chemical investigations have shown that the contents of a ranula are *not* saliva, but consist of a more or less viscid, albumen-like fluid, and the knife of the anatomist has found, where a ranula existed, also a healthy salivary duct. The same treatment which is successful for the cure of cysts, namely, extirpation and cauterization, proved to be the best adapted for the complete cure of ranula.

A ranula may become so large that it presses the tongue up and back, and produces attacks of suffocation. Allan Burns relates a similar case. A man who suffered from a tumor of the tongue went to the office of Dr. Cline and waited in his reception room. Suddenly the surgeon heard the noise of a fall and a dull moaning. He ran out to ascertain the cause, and found the patient lying on the floor almost suffocated. Thinking the man had a foreign body in his larynx, he at once proceeded to perform tracheotomy, but noticed however in time that the patient's tongue was pressed backwards by a ranula, which at the same time produced a large prominence under the chin. He quickly opened the tumor, and discharged therefrom a considerable quantity of pus and lymph.

Salivary calculi in Wharton's duct consists almost exclusively of pure phosphate of lime. Nicod saw one $\frac{1}{2}$ inch long and 3 lines breadth. The case herein reported by me furnished an example of a much larger stony concretion than that of Nicod.

FATAL CELLULITIS FOLLOWING THE USE OF THE ELASTIC BANDAGE.

BY

STEPHEN SMITH, M. D.,

Surgeon to Bellevue Hospital, New York.

A German, æt. 25, entered the hospital for treatment of necrosis of the humerus. He gave the history of an attack of acute periostitis, terminating in suppuration and the formation of sinuses.

On exploring through these openings cloacæ were found, and within the involucrum loose fragments of necrosed bone were detected. There were two principal sinuses, one on the external part of the arm at the junction of the upper and middle third, and the other on the internal surface two inches above the flexure of the elbow. The patient was in excellent health, of stout build, and actively employed.

While the anæsthetic was being administered, the elastic bandage was applied from the fingers to a point just above the upper opening. As there appeared to be no purulent infiltration of the soft tissues, the limb having the general tonicity of health, the bandage was applied with equal firmness over the diseased portion of the limb.

The operation was quickly over, the dead bone being readily removed, and a free passage established between the upper and lower openings. This channel was thoroughly washed out with syringefuls of carbolized water, and antiseptic dressings applied.

On the following day there were signs of a local inflammation on the external part of the arm, just above the line made by the bandages. An abscess formed at that point, which was finally opened, and discharged a quantity of fetid pus. Before it was opened, however, there were evidences of a commencing cellulitis, taking its departure from this abscess as a centre. This cellulitis spread rapidly over the shoulder, neck, and anterior portion of the thorax, with high bodily temperature and rapid pulse. Areas of cellulitis also developed over the hip and leg. Pleurisy soon after appeared, attended with dyspnoea and great prostration. Irregular chills followed, with clammy perspiration, a sallow skin, and all the evidences of acute pyemia. Death took place on the twelfth day from the operation.

The autopsy proved the extension of the cellulitis from the abscess of the arm over the thorax and to the pleura; but the swelling and infiltration of the arm in the vicinity of the abscess, and wounds of operation, made it impossible to trace the undoubted connection between them.

The infiltrated cellular tissue was very offensive; the pleura was covered with shreds of decomposing membrane, and the cavity contained sero-purulent fluid. Neither the lungs, brain, nor liver were involved.

In the use of the elastic bandage in operations for necrosed bone, where it is so useful by giving a bloodless wound, I have always been careful to apply over the infiltrated tissues a layer of soft and yielding material—as cotton wool—to prevent the possibility of forcing any septic matters into uninjured cellular tissue beyond the wound. But in this case there seemed to be no unusual succulence of the tissue, and the bandage was applied with ordinary tension over the diseased structures.

It would, perhaps, be more wise to follow the eminently conservative method of procedure laid down by Prof. Esmarch, who introduced this plan of securing bloodless operations. He says: "If you are operating upon parts infiltrated with ichorous matter, you must refrain from emptying them completely of their blood. If you bandaged such soft parts tightly, you would be in danger of driving the infectious matter into the meshes of the cellular tissue and extremities of the lymphatic vessels, and might possibly do much harm thereby. In such cases I do not put on the bandage at all, but content myself, before applying the tubing, with emptying the limb as completely as possible of blood, by causing it to be raised high in the air for a few moments."

NEW YORK, 57 W. 42ND STREET.

HOSPITAL RECORDS.

ROOSEVELT HOSPITAL, NEW YORK.

REPORTED BY G. E. TWISS, M. D.

EXSECTION OF KNEE-JOINT:—SERVICE OF DR. ERSKINE MASON.

P. J. C., æt. 19, admitted to hospital March 15, 1877. Patient's family history good. He was perfectly healthy till he was eight years old, when one morning on getting out of bed he found his left knee stiff and painful. The joint became much swollen, and for two years he was unable to use it. About this time a hard swelling appeared on the outer side of the knee. It was painful for a time, and then passed away. After that he could use the joint, though it was stiff. About five years ago the outer surface of the joint became inflamed, and this time increased in size, broke and discharged pus on the outer surface of the leg, $1\frac{1}{2}$ inches below head of fibula. The opening closed soon after. Up to one year ago he used the limb, but it was a little stiff. At that time an abscess formed without known cause on the front of the knee, just below the patella. It broke and discharged pus, and has remained open ever since, the material coming from it being thin, watery, and almost inodorous. During the latter part of last November patient was exposed to cold, and the knee became very sore and discharged pus through the old sinus. It soon subsided to its former condition. In December he was examined by a doctor, who told him that there was "dead bone in the joint."

On admission patient presents arthritis of left knee; the whole limb is somewhat smaller than right. Circumference: Middle of thigh, right, $17\frac{1}{4}$ inches; left, $13\frac{1}{2}$ inches. Middle of leg, right, 12 inches; left, $10\frac{1}{2}$ inches. The left knee is much larger than right. Circumference at top of patella: right, $13\frac{1}{4}$ inches; left, $13\frac{1}{2}$ inches. Circumference at middle of patella: right, $13\frac{1}{4}$ inches; left, $14\frac{1}{2}$ inches. There is a sinus opening $1\frac{1}{2}$ inches below lower border of patella.

March 20th.—Patient, under ether, examined by Dr. Mason. The head of tibia is shifted backward and inward, and is rotated on the long axis of the bone, so that the foot is somewhat everted. The leg cannot be completely extended, and flexion is limited to about 15° . A probe being introduced into the sinus and passed backward touches dead bone, apparently the head of the tibia. Pushed more in and upwards it touches

the articular surface of the femur. There is a sinus running more superficially in an upward direction, and the point of the probe can be felt at the upper and inner side of the patella. The probe can also be felt, when pushed outward, to point beneath the skin just in front of the tendon of the biceps muscle. When pushed inwards it appears on the inner aspect of the joint, diametrically opposite to the former. The finger being pushed into the sinus comes in contact with the rough head of the tibia and the under surface of the femur; this, as well as the sinus, being covered with a soft friable material like granulation tissue. The posterior surface of the patella can be felt, the movements of that bone being somewhat restricted. Joint cavity washed out with sol. acid salicyl. and cloth wet in lot. plumb. et opii applied.

March 22d.—Very little disturbance resulted from the examination.

March 24th.—Patient under ether. Esmarch's bandage having been applied, a tranverse elliptical incision was made across the head of the tibia, through the old opening, for the purpose of exploring the sinus and discovering the condition of the joint. The lower flap was then dissected from the bone and pulled downward, when it was found that there was an abscess in the head of tibia, opening externally a little to right of median line, and opening into the joint. After consultation it was decided to exsect. The first incision was enlarged on either side, and the anterior and lateral ligaments divided, the leg being strongly flexed on thigh. The joint being thus opened, it was discovered that the internal condyle of the femur was also diseased. The crucial ligaments and semilunar cartilages had been destroyed. The tissues were then dissected from the head of the tibia, and a portion of that bone removed by sawing from behind forwards. A wedge-shaped piece of bone was thus removed, the thickest portion being anterior. There was an opening in the cut surface of the tibia leading into a carious track about $\frac{1}{2}$ of an inch in width in the centre of the bone. This was removed with a gouged bone scraper. The tissues were then dissected and depressed from the condyles, and their transverse section was sawn from the femur, the artery being guarded with a retractor. A soft, carious spot was found on the sawn surface of the internal condyle, a little external to its centre, which was removed with a bone scraper. The patella was then dissected from the surrounding tissues and taken out. Esmarch's bandage was then removed. Hemorrhage slight, no ligatures or torsion being required. Wound irrigated with sol. acid salicyl. 1-150. The cut bone surfaces were then brought into opposition, and wired together with silver-plated copper wire. These were twisted and brought

out on either side. The skin flaps were brought together and held in position by silk sutures. A plaster of Paris splint was then applied, strengthened behind by a wooden splint, and laterally by iron brackets, to which the wires were fastened. The knee was then tightly bandaged with crinoline. 6 p. m.: pulse, 108; temp., 99. Recovered from ether. Has much pain in knee. Considerable oozing of blood from the wound. Packed lint applied, and knee snugly bandaged with ordinary bandage.

March 25th.—9 a. m.: pulse, 120; temperature, 99 $\frac{1}{2}$. Some discharge of pus; otherwise quiet. Dressed as before. 6 p. m.: pulse, 132; temperature, 102 1-5°.

March 26th.—Slight oedema round wound. Irrigation with sol. acid salicyl, 1-200. Mosquito netting bandage applied. A moderate amount of healthy pus discharged. 9 a. m.: pulse, 124; temperature, 100 2-5°. 6 p. m.: pulse, 140; temperature, 102°.

March 27th.—Patient complains of headache and nausea. Appetite poor. Bowels moved freely. Does not sleep well. Free discharge from wound. Some swelling and oedema still. Has sharp, starting pain in the knee. Pressure applied by means of straps of adhesive plaster, and bandage of mosquito netting applied. Given daily spirits frument, 3 oz. 9 a. m.: pulse, 140; temperature, 102 1-5°. 6 p. m.: pulse, 142; temperature, 103°.

March 28th.—Doing well. Slept pretty well last night. Sutures have all been removed, and the flaps have united in several places. Pressure kept up, and cloth wet in sol. acid salicyl. laid over joint. Pulse, 148; temperature, 104 $\frac{1}{4}$ °. Pulse, 146; temperature, 103°.

March 29th.—Less pain in the part. Patient feeling stronger. A. M.: pulse, 152; temperature, 101 3-4. P. M.: pulse, 140; temperature, 103 1-5°.

March 30th.—Was delirious last night. Knee painful this morning, though it looks well. Ord. opium, gr. $\frac{1}{4}$, every three hours. A. M.: pulse, 136; temperature, 102 $\frac{1}{2}$ °. P. M.: pulse, 140; temp., 102°.

March 31st.—Patient slept well last night. Appetite good. Discharge abundant and healthy. Swelling much decreased.

April 3d.—Doing well. Discharge healthy and decreased in amount. A. M.: pulse, 124; temperature, 99 $\frac{1}{2}$ °. P. M.: pulse, 150; temperature, 103°.

April 4th.—Knee doing well. Patient complains of cough; had a chill last night. Examined by Dr. Mason, who found pneumonia of lower lobe of right lung.

April 5th.—Ordered spirits æth. nitr. a drachm every three hours; dry cups to right side of chest. 9 a. m.: pulse, 150; temperature, 101° . 6 p. m.: patient suffering from dyspnœa. Ordered ammon. carb., 1 dr.; spts. vini gal., 1 oz.; spts. æther nitr., 1 oz.; mucilage, $\frac{1}{2}$ oz.; aq. ad., 4 oz. S. Half a tablespoonful every 3 hours. Pulse, 148; temp., $103\frac{1}{2}^{\circ}$.

April 6th.—Patient sinking, and delirious most of the time; when conscious suffers from dyspnœa.

April 7th.—12.45 a. m. patient died.

BELLEVUE HOSPITAL, NEW YORK.

**OSTEO SARCOMA OF ILIUM—REMOVAL OF A PORTION OF THE TUMOR BY THE
GALVANO CAUTERY.—SERVICE OF DR. STEPHEN SMITH.**

Mary Downes, æt. 16, single, native of U. S., admitted March 21st, 1877, of full habit of body. In March of last year, while passing a table, she struck the left anterior iliac region against the corner. After the accident she limped when walking, and had pain just below the anterior left superior spine of the ilium. About three weeks afterward she noticed a swelling directly at this point, which gradually increased in size. The pain was of a lancinating character from the first, and was more severe at night, sometimes extending as far down as the knee. About four weeks ago an opening was made into the centre of the mass, where fluctuation had been detected, and quite a large quantity of bloody pus was discharged. This, however, did not relieve the pain. Two days after the incision was made a fungous-looking mass, about the size of an egg, made its appearance, accompanied by severe pain. This mass has grown rapidly, and now has a mushroom appearance. On examination there is found to be a circle of hardness about the excrescence, extending three or four inches down the anterior part of the thigh, as far backward as the trochanter, and seeming to fill up the left iliac fossa. The fungous growth is directly over the left superior spinous process of the ilium.

April 5th.—The fungous-looking mass has grown very rapidly, and is now half as large again as when she came in. It discharges considerably more than at that time, through an opening in the centre of the protruding mass. The pain is more severe, especially at night, and she has frequently to take morphia to quiet it. The pain is mostly deep-seated; sometimes, however, it is situated in the protruding mass, when iodoform

sprinkled over it gives great relief. The circle of hardness is increasing. Her bowels are somewhat costive, and movements cause sharp pain in the tumor. Her appetite is good, and she takes stimulants quite freely. The pulse is quite frequent, being over 100, and her temperature, in the morning, about $99\frac{1}{2}$ °; in the evening, 101° or 102° . She now has night sweats, for which she was given ext. belladonna, gr. $\frac{1}{2}$, t. i. d. A portion of the protruding growth was sliced off without giving her any pain. Hemorrhage was arrested by liq. ferri persulph. This specimen was examined microscopically by Dr. Heitzman, who pronounced it to be of the most malignant form of osteo-sarcoma.

April 10th.—Urine examined today. Specific gravity, 1020; neutral, and contains no albumen.

April 19th.—The fungous-like protruding part of the tumor has given great annoyance and uneasiness, from its contact with the bed clothes, and preventing all movements and changes of position of the body. It now measures 27 cm. (10 $\frac{1}{4}$ inches) around the pedicle, and 36 cm. (14 $\frac{1}{4}$ inches) around its largest part, and is growing rapidly, and it was thought advisable to remove it.

To avoid the risk of severe hemorrhage, the tumor being exceedingly vascular, it was concluded to use the galvano-cautery wire. Accordingly Dr. Piffard, of this city, was invited to operate, using for the purpose his battery. About ten or eleven inches of wire were required to surround the neck of the mass, and the operation lasted forty minutes. During the operation there was a slight amount of hemorrhage, controlled in part by chloride zinc and pressure. Upon removal of the mass no bleeding points were found. The portion removed weighed $19\frac{1}{2}$ oz. Av. A sponge soaked in persulphate of iron was firmly bandaged over the part. The pain was considerable after the effects of the chloroform passed off, and liq. morph., U. S. P., two drachms, was ordered, with a drachm afterwards as needed.

April 20th.—Temperature about the same as before the operation, being, P. M., 100° ; A. M., 99° . She passed a much more comfortable night last night than for a long time. The wound was today dressed with lint soaked in carbolic acid solution, 1 part to 60.

April 23d.—The fungous mass has again begun to protrude underneath the eschar, at its lower edge. It is already nearly an inch high, and of conical shape. The mass seems to be rapidly involving the deeper tissues, and the enlarged veins are very prominent over its surface. Patient very comfortable.

April 24th.—The anhydrous sulphate of zinc was applied to the mass,

and iodoform afterward sprinkled over the surface. The patient is much weaker ; pulse, 140 ; temperature, 100°.

April 30th.—The mass has continued to increase in size. There is now some oedema of the leg. The pain is increasing, and is of a most severe character in the hip and knee, although it is felt the whole length of the leg. The integument around the mass is red and inflamed. Temperature, 100° to 102°. Patient is sinking quite rapidly, and the termination is not far distant.

REMARKS.—The operation in this case was performed with a view to afford temporary relief and promote the comfort of the patient, which, in a measure, it did. The microscopical examination had shown that permanent benefit was not to be hoped for.

BIBLIOGRAPHY.

ANALYTICAL AND CRITICAL REVIEWS.

A Practical Treatise on Diseases of the Skin. By Louis A. Duhring, M. D. Philadelphia. J. B. Lippincott & Co., 1877.

In a very terse and modest preface the author states that his aim has been to write a concise, practical and useful treatise on diseases of the skin, in which the subject was made simple and intelligible. That such a treatise is urgently wanted those best acquainted with the subject will readily attest ; for, although we have numerous works of greater or less scope, each one is open to objections, and in one particular, or another fails in being a systematic text book. The time had certainly come when it was necessary for some worker to go carefully and systematically over the whole field of dermatology, and to bring the subject up to its proper level. We know of no one better fitted in all essentials for the task than the author of the present treatise, and at the outset we may express our pleasure at the satisfactory result attained.

As a mark of esteem for his former teacher, Dr. Duhring dedicates his work to Hebra, whose teachings have evidently been of great service to him in the construction of this book. The general arrangement followed reminds the reader of the great work of the German master, whose classification, slightly modified, has been taken as its frame work. The elementary essentials of dermatology are treated of in a very clear, simple and graphic manner. The anatomy of the skin is well described and admirably illustrated after drawings made by Dr. Van Harlingen, whose labors in this and other branches of the subject are worthy of high praise.

We are particularly pleased with the chapter on symptomatology, which will do much to render the study of the subject easy and satisfactory. Each lesion is first defined in an aphoristic form, and then treated of quite fully. The lecture on pathology of the skin is an admirable supplement to that treating of symptoms. Perhaps no clearer indication of the thoroughly practical character of the book can be gained

than is offered by the chapter on etiology. Here the author states what he is really warranted in stating by the facts thus far elicited, and does not indulge in any theories. To our mind this is very judicious, for, as a rule, theories should not find a place in a practical text book.

Though containing nothing strikingly noticeable, the sections on diagnosis, treatment and prognosis are very full and clear. Under the head of anomalies, or disorders of secretion, the various affections of the sebaceous follicles are fully described, seborrhœa being treated of excellently and at length. Perhaps if we have any criticism to make in this connection it is that we hardly can go as far as the author does in recognizing certain internal conditions as causing acne. We regard the section upon eczema, which occupies sixty pages, as a most excellent one, constituting to our mind the most satisfactory description as a whole of this disease yet published. No one can read the section without deriving from it great benefit. The various other exudative affections are well described, especially lichen planus and psoriasis.

As the limits of this review do not admit of minute criticism, we shall only briefly allude to the remaining striking features of the book. The sections on hypertrophies and atrophies are very good, while that on new growths is in all respects admirable; as an instance we may mention the section on syphilitodermata as being very full, complete in all essentials, and perhaps the best one of its length thus far published. The same praise must be accorded to the section on parasites, which is certainly in all respects admirable, and illustrated by engravings original to this book, made from Nature, being better in every particular than any now in use. These will assist the observer, as they are true to Nature, and not objects of fancy.

Such then are the strong points of this valuable book, which is in all respects fully up to the mark aimed at by the author. We have very few works in medicine as good as this one. Its descriptions are clear and true to Nature, while the directions it gives for treatment are satisfactory in all respects. There is evidence on every page of hard, conscientious work and deep thought on the part of its writer. The style of writing is terse, clear and to the point. Finally, then, we can recommend this as the very best hand book of skin diseases, certainly in the English language.

The Anatomy of the Head. By Thomas Dwight, M. D. 8 vo., pp. 136.
Boston, H. O. Houghton & Co., 1876.

This little work of Dr. Dwight, we feel sure, will be a welcome com-

panion to every student of anatomy, especially in this country, as it covers a field which has been very much neglected, viz., the relation of the several parts to one another. As far as the parts above the hyoid bone are concerned, our author has performed his task in an admirable manner, and his plates of sections of the frozen head are both interesting and valuable. A practical knowledge of anatomy, we believe, is only to be acquired in this way, and we sincerely hope that ere long it will form an important part of the course in all our medical schools. We should be pleased to see Dr. Dwight's little volume followed by another more extensive one on the anatomy of the human body, and should he attempt its production he certainly would meet with the support of the profession. The work before us should be in the library of every surgeon and anatomist.

A Course of Practical Histology. By Edward Albert Schafer. 12 mo., pp. 304. Philadelphia, Henry C. Lea, 1877.

In his preface our author states that "the purpose of this work is to afford those engaged in the practical study of Histology plain and intelligible directions for the suitable preparation of the animal tissues." Can we do more than say that he has accomplished his purpose? After devoting a short chapter to a description of the essential parts of the microscope, and giving general directions for work, the several tissues are treated of under separate headings. No attempt is made to describe them, but merely plain, practical directions for their preparation for examination, and mounting. There has long been a demand for such a work, and it will be welcomed by every student of histology.

ARCHIVES
OF
CLINICAL SURGERY.

VOL. II, No. 3.

JUNE, 1877.

Whole No., 12.

ORIGINAL PAPERS.

ON REFLEX MUSCULAR CONTRACTION AND ATROPHY IN
JOINT DISEASE—WITH REMARKS ON MECHANICAL
EXTENSION AND A DESCRIPTION OF NEW APPARATUS.

BY
NEWTON M. SHAFFER, M. D.

Surgeon to the New York Orthopædic Dispensary and Hospital; Orthopædic Surgeon to St. Luke's Hospital.

The indications for applying mechanical extension in the treatment of *morbus coxarius* in a direction which corresponds with the long axis of the contracted limb were long since demonstrated.* The importance of these indications as designating a principle in the mechanical treatment of those forms of arthritis to which extension and counter extension are applicable has not however, been universally recognized. Mechanical extension in joint disease is capable, if properly used, of accomplishing much good. Dr. D. Prince, in a recent paper, † says, "It has done more to lessen the severity and shorten the duration of joint disease than all other things put together." I would add to this statement, however;—when the extension is made subservient to the pathological conditions. Dr Prince also mentions the fact which Davis demonstrates, and to which I wish to call especial attention, viz. that extension should be applied so as to avoid joint pressure. In my efforts to make extension meet this indication, especially in diseases of the hip and knee joints, I have devised the apparatus which is described below.

* *Davis's Conservative Surgery*, pp. 220 and 221.

† *Considerations in Relation to Diseases of the Joints*—*American Practitioner*—Feb'y 5th, 1877.

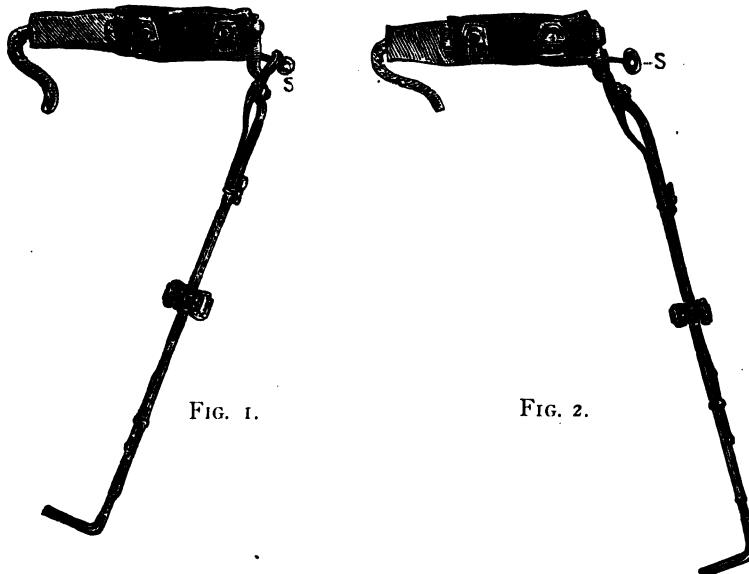
The primary contraction that occurs in joint disease is reflex. It has its origin in an inflammation of some of the joint structures. Clinical experience proves that whatever relieves joint pressure and arrests motion, will modify the contraction, and that whatever increases joint pressure aggravates the inflammation and intensifies the contraction. The primary indications are therefore to relieve joint pressure and to arrest motion. These can both be accomplished by a properly adjusted extension apparatus. But if the apparatus be improperly adjusted it is apt to do harm. If we apply extension, for instance, to a diseased hip joint where flexion of the thigh exists, in a line which corresponds with the long axis of the trunk, we create a lever, where the fulcrum, (insertion of flexors) lies between the power (extension) and the resistance (joint surfaces). It is with the purpose of avoiding joint pressure in this condition that the limb is placed on an inclined plane—the patient being in the recumbent position. The extension is then exerted, so far as the conformation of the hip joint will permit, directly upon the joint, and the contracted muscles yield, as the cause of the contraction is modified. In a simple case of this character no mechanical device aside from the extension apparatus is necessary, except the inclined plane upon which to rest the limb. Gravity is all that is necessary to overcome the resistance, thus proving that a gentle force alone is required to supplement the extension in overcoming the deformity. When, however, the flexion is complicated (as it usually is) by either adduction or abduction of the limb in coxitis, gravity ceases to be an adjuvant force as applied to these complications. The means that have proved the most satisfactory in these conditions, in my experience, are described further on.

We may state it as a rule, which is applicable to all diseased joints for the treatment of which mechanical extension is indicated, that we should never use the contracted limb as the long arm of a lever as a means of exerting any considerable force (power) upon the diseased joint surfaces, (fulcrum) to overcome the contracted muscles (resistance). On the contrary, in arranging our apparatus we should bear in mind the anatomy of the joint, its pathological condition and the object to be attained. The extent and direction of the force applied should be governed by these considerations and we should be prepared to gently follow up any remission in the contraction, and thus gradually bring the limb into the desired position.

The employment of a considerable degree of force in overcoming the deformity produced by reflex muscular contraction cannot be too strongly deprecated. If gentle means do not answer, it would be better, in

my opinion, to perform tenotomy or myotomy, and thus overcome, at least in part, the resistance, or even to ignore the malposition and to aim only at fixation—leaving the deformity for subsequent operative surgery, than to apply undue force to an already diseased joint, merely for the sake of securing a better position for the limb. Happily the cases are exceptional where the deformity cannot be controlled by measures that will not inflict injury, or aggravate the disease.

In the application of these important principles, in the treatment of joint diseases, I have found the existing appliances imperfect. Dr. Taylor's hip splint affords the best means of making extension in hip



joint disease. To it, in 1863, Dr. Taylor added an "abduction screw". A description of the splint and screw are not necessary here. They are both familiar to the profession. It need only be said that they do not, either singly or combined, permit the application of the extension, in many conditions that present, in the *exact* line of the deformity. I have devised what I have called a "lateral screw", which allows extension in *any* direction that is indicated, and which at the same time can be made to act, without removing the splint, as an *adductor* or an *abductor* of the limb, at the pleasure of the surgeon. It can be attached to Dr. Taylor's splint in the same manner as his "abduction screw."

Figs. 1 and 2 represent the "lateral screw" as applied to one of Tay-

lor's splints. 1 shows the shaft adducted,—2 abducted. By simply turning the screw at S. the shaft of the splint can be made stationary at any point between the extremes indicated in the engravings. By using the screw, when the splint is adjusted, the surgeon is enabled to gradually and very gently change the position of the limb at will.

The "lateral screw" (Fig. 3), consists of two parts, A and B, joined together by the lateral hinge C. The part A is fastened to the pelvic band. The part B is attached to the shaft of the splint. Through the everted lip D, there passes a screw S, which operates through a button (which revolves on a horizontal axis), and which is fastened into another button (also revolving on a horizontal pivot) in the part A. By turning this screw we can either approximate the lip D toward the part A, (producing *abduction*), or by reversing the screw we can separate D from A,

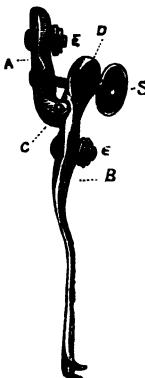


FIG. 3.

and *adduct*. E, E, represent the screw bolts, by which the apparatus is attached to the hip band and shaft of the splint.

Before the splint is applied the screw should be turned as the circumstances indicate until the direction of the shaft of the splint corresponds with the position of the limb. After adjustment, extension is applied, in the "line of the deformity," and no attempt should be made to overcome the contraction by the use of the screw, for several days. It should then be used very gently. It is better to imitate the force of gravity, by which flexion is generally so readily overcome, and only "follow up" the contractions as they are modified by the extension, immobilization and the proper therapeutical adjuvants. If we use the screw to *abduct*, the ordinary perineal pads, which form the basis of the

counter extension, will also be the point of resistance. When we use the screw to *adduct*, it will be necessary to supplement the *perineal* with *shoulder* straps, and to apply a little more extension than is required, so that as we use the "lateral screw," the extra force may be transferred to and lost upon the shoulders. Adequate extension and adduction are thus obtained. We should also secure the hip band firmly by the padded strap, which completes the circumference of the pelvis. In order to secure the shoulder straps in position, we cross them as they pass upward from the hip band to the shoulders on both the anterior and posterior walls of the thorax. It is also necessary to secure the pelvic band, so that its anterior half will form a slightly acute angle with the shaft. This may be done with webbing straps.

In a case of *morbus coxarius* (Mary McDonald, aged 8,) occurring in my service at St. Luke's Hospital, the limb was abducted so that the external malleolus was removed $1\frac{1}{2}$ inches from the median line. The limb was rigidly held in this position (with slight flexion), and no motion whatever at the joint could be detected. Taylor's splint, with the "lateral screw" was applied, as above described, in the *exact* line of the deformity. I then made exaggerated direct extension, and immediately proceeded to adduct the limb with the screw, thus transferring the extra force, which would otherwise be exerted on the *perineum*, to the *shoulders*. The result was an immediate and painless adduction of the limb to the extent of three inches. On the second day, with the splint removed, the limb assumed under gentle manipulation, unaided by any artificial support, a position six inches nearer the median line. In other words, extension in the direct line of the deformity, with a painless adducting force had, in twenty-four hours, relieved the deformity to this extent. The limb was thus gradually adducted until the deformity was overcome in about ten days. This case was an extreme one, so far as the deformity was concerned, and I selected it as a case in which to test the efficiency of the "lateral screw" as an *adductor*. The degree of the force applied was unnecessary. But as no pain was excited and no constitutional symptoms supervened, we felt justified in making it a case in which to note the result of pressure upon the shoulders, and the necessary arrangement of the entire apparatus. The result was extremely satisfactory. The patient is now walking about in a plain Taylor splint—the screw having been removed. In another case, also in St. Luke's Hospital, (Mamie Fitzgerald, aged $4\frac{1}{2}$,) I applied the "lateral screw" as an *abductor*. The limb was adducted and flexed to an extreme degree. By a cautious use of the direct extension with the "lateral screw" the

limb was easily straightened, with no unfavorable symptom, and without pain.

In all cases, the inclined plane should be used to accommodate the contracted flexors. I generally use for that purpose two or more tolerably hard pillows arranged to meet the indications.

The anatomy of the hip-joint, and the relations to it of the neck and shaft of the femur, render the problem of controlling extension upon this articulation, in the manner indicated, a rather difficult one. As we make extension with Taylor's splint, the force passes to the trochanter major, in the line we would choose. But here the angle of the neck, and the ball and socket articulation at the extremity of it, interfere with the transmission of the force in a direct line. In extreme adduction of the thigh, for instance, where the distal extremity of the limb lies inside of the mesial plane of the body, the inferior portion of the joint would be subjected to a pressure as a result of extension, that would be equivalent to the force applied. The difficulties in the way of making extension in the line of the neck are obvious. For these reasons we should be very guarded in the use of that which we apply in the line of the shaft of the femur. I have seen several cases where a disregard to these simple anatomical facts, has aggravated the disease. Under any circumstance we should not depend on extension wholly. Recognizing as a fact that, in by far the greater number of cases, the initial lesion consists of an inflammation in the cancellous structure of the bone, and regarding traumatism as an exciting cause, I do not depend on mechanical means alone in the treatment of an essentially constitutional disease.

The positions assumed by the thigh in *morbus coxarius* (as a type of joint disease) are due, I believe, to the reflex contraction. In other words, we have associated with the joint disease and dependant upon it, an inflammation of the peripheral nerves supplying the joint, and that the reflex contraction as well as the direct atrophy are but the expression of the nerve lesion. I may state as a result of my clinical observations on this point, that the force and persistency of the contraction, the muscles affected by it, the degree of muscular atrophy and the rapidity with which it occurs, and the extent of the impaired electro-muscular contractility, all have their value as indicating the actual pathological condition of the diseased articulation, and are of great service in making both our diagnosis and prognosis. In chronic osteitis, especially if associated with a chondritis, the contraction is firm, tense and very persistent. It increases with greater or less rapidity until ankylosis

is simulated. The atrophy is slowly but steadily progressive and the muscles show a marked decrease in Faradic reaction. This is especially the case in the dry osteitis. In chronic (gelatinous) synovitis, the contraction is not so marked, and the muscles do not so quickly respond as they do in chronic osteitis, to the stimulus of passive motion. The movements of the joint are more or less free and within a limited area, are not productive of pain. The atrophy also occurs slowly—more slowly than in the chronic epiphyseal inflammation, and the reduction of the Faradic reaction is not so great. The trophic disturbances are in accord with the sluggish nature of the lesion. In acute synovitis, however, the atrophy occurs sometimes with surprising rapidity, and the contractions sympathize with the acute character of the disease. Paget says: "This wasting occurs quickly in nearly all acute diseases of the joints—more slowly in the chronic inflammations."* Again, when speaking of acute joint disease: "It is, I repeat, not a mere wasting from disuse—it is far more rapid than that, more like what has been called acute atrophy of muscles, such as is seen in the swiftest cases of infantile paralysis."† This wasting, which Paget calls "reflex atrophy," "seems dependant on disordered nervous influence, and often appears proportionate to the coincident pain, as if it were due to the disturbance of some nutritive nervous centre, irritated by the painful state of the sensitive nerve fibre."‡ Coincident inflammation, rather than "coincident pain," would, I believe, have better expressed the condition.

Brown-Séquard was the first to propose and demonstrate the following propositions: "Nerve irritation alone is capable of determining rapid and early atrophy of the muscles, preceded by decrease or disappearance of Faradic contractility. Complete nerve division does not induce atrophy and loss of electrical contractility until after an incomparably greater lapse of time, as in the case of prolonged inaction."§

Charcot remarks: "If lesions, whose consequence is the abolition or suspension of the action of the nervous system, are impotent to produce in distant parts other nutritive disturbances than those attributable to prolonged inaction, it is not thus as regards lesions, which determine either in the nerves or nervous centres, an exaltation of their properties, an irritation

*. Clinical Lectures & Essays—page 208.

†. Op. Cit., p. 209.

‡. Op. Cit., p. 209.

§. Lectures on Diseases of the Nervous System. By J. M. Charcot. New Sydenham Society, 1877, pp. 13 and 42.

or an inflammation."* Again, he says: "It appears in fact to be demonstrated that the latter [muscular alterations consequent on nerve-irritation] supervene with much greater rapidity, and are preceded and accompanied by more or less marked modifications of electrical contractility, which do not show themselves in the former [muscular alterations connected with functional inertia] with the same characteristics, and only make their appearance at the end of a very long lapse of time."†

The atrophy that occurs from simple functional inertia combined with the pressure produced by adhesive plaster and bandaging, is witnessed when the not infrequent error is made of treating by these means and an apparatus, a neuromimesis of a joint lesion, for the real disease. This simple atrophy following disuse and pressure is altogether different from that which ensues from an actual joint lesion, and is unaccompanied by a loss of electro-muscular contractility. These facts I have demonstrated to my own satisfaction in many cases. But in order to secure the opinion of a high authority, I invited my friend, Dr. E. C. Seguin, to test several cases occurring in my service at the Orthopædic Dispensary. Four cases of hip-joint disease [none of which had been tested by myself,] selected at random, were examined by Dr. Seguin, in presence of Drs. M. R. Vedder, of N. Y., A. G. Thompson, of Islip, L. I., and the house staff of the hospital. In every case, the muscles of the *thigh* showed a very decided decrease of Faradic contractility, while those of the *leg* showed a normal reaction. Here again was shown the difference between the trophic disturbances following joint disease and those which ensue upon simple disuse. All of these cases had been under treatment for a long time—the affected limb being subjected to the pressure both from adhesive plaster and bandages—and kept in a position where no weight had been thrown on it for many months.

I have recognised these facts for a long time, and it has been my custom to instruct the house staff at the Orthopædic Dispensary and Hospital, to ignore muscular atrophy, so far as treatment was concerned. Properly applied extension will prevent rather than augment that which is due to the disease. We certainly, in view of the fact that it is unimportant compared with the disease we are treating, can afford to ignore that which occurs from disuse alone. I have under my observation now a case of joint disease in the adult, of over fifteen years

*. Op. Cit., p. 12.

†. Op. Cit., pp. 37 and 38.

duration, where supports of various kinds, or crutches, have been constantly used. There exists a slightly reduced Faradic reaction only in those muscles which are unconnected with the diseased articulation. As Charcot remarks, the nutritive disorders of the muscles consequent upon functional inertia make their appearance at the end of a *very* long lapse of time.

The value of these facts, as a means of diagnosis and prognosis, I shall make the subject of a future paper.

A case of traumatic hip-joint disease sent me by my friend Dr. Leroy McLean of Troy, N. Y. will illustrate the relation of the reflex contraction and the atrophy to the lesion.

Mr. F. H. P. of Glen's Falls, N. Y., a strong and healthy man of 24, fell, on the 4th of November last, through an elevator well, a distance of 36 feet. The force of the fall was expended on the left hip-joint in a direction upward and outward. No dislocation or fracture occurred. After the fall he was assisted to rise and walked several steps. The immediately urgent symptoms following were those of intestinal obstruction, though there was an ecchymotic line about two inches broad, extending from the inside of the thigh to the hypogastric region. No acute joint symptoms were present. After a time there was an uneasy sensation about the joint with pain in the knee, and the limb began gradually to assume an adducted and flexed position. The adductors and flexors became "tight" and the latter "stood out like large cords". At the end of three weeks the patient got up and moved about on two crutches, just touching the toe to the floor. He used crutches for three weeks, and afterwards, a cane. He finally, ten weeks after the accident, discarded all artificial support and walked unaided, with a deformed and apparently shortened limb. But as exercise was thus continued, troublesome symptoms began to appear. Any sudden movement of the limb gave pain, especially at the knee, and during the night he was frequently awakened by it. The limb became more deformed, the wasting increased, and the joint grew more and more rigid. The general health was also affected. At the examination of the patient (April 7th last) I found the joint apparently ankylosed with marked adduction and slight flexion. The most careful tests gave no evidence whatever of motion. The flexors and adductors were rigidly and prominently contracted. As Dr. McLean had only a short time before administered chloroform, and as he informed me that the contraction wholly disappeared under its use (only to return, however, with consciousness) I did not administer an anaesthetic. I should have done so but for this positive information.

The Doctor also stated that no roughness of the joint surfaces or crepitus was discoverable. Careful measurement showed that no shortening had occurred. The atrophy of the muscles of the thigh was marked, and (as was subsequently ascertained) their electric contractibility greatly impaired. Faradic reaction was normal in the muscles of the leg. The patient complained of uneasy sensations about the joint and at the knee, and the symptoms mentioned above were all present, aggravated by the natural progress of the disease. Carefully applied extension in the exact line of the deformity (using the "lateral screw" and inclined plane) has corrected the deformity, relieved the pain and re-established a considerable degree of motion. This motion is limited, however, by an involuntary and very sudden contraction, principally of the adductors. The patient (who is very intelligent) likens the sensation to that experienced when one anticipates a blow upon the epigastrium, which, however, is avoided. He has made extraordinary attempts to allow free passive motion of the joint, but the involuntary check invariably occurs at a certain point, not from the pain actually inflicted, but from the apprehension that it will occur. We have here a hip-joint lesion from the differential diagnosis of which synovitis, both acute and chronic, may be eliminated and the cause of which is distinctly traumatic. The symptoms, disregarding entirely the reflex contractions, pointed unmistakably to an osseous lesion of the hip-joint. I can not doubt that it is inflammatory. The reflex contractions (yielding wholly under chloroform) were so firm and tense as to simulate an actual synostosis of the joint. The atrophy has been progressive and exceeds to a considerable extent that which would be induced by simple disuse—and the greatly diminished electromuscular contractility of the muscles of the thigh (those of the leg remaining normal), together with the history of the case, forms an interesting contribution to the study of joint diseases. We add, in conclusion, that these same conditions of reflex contraction, simulating ankylosis, slowly progressive atrophy and impaired Faradic contractility, exist also, in a marked degree, in those unmistakable cases of dry osteitis which affect the hip-joints of children.

The remarks occurring in the first paragraph of this paper are peculiarly pertinent to those lesions of the knee-joint for the treatment of which extension and counter extension are applicable. The various appliances which have been used in treating the diseases of this articulation are, as a class, very faulty in principle. Here again extension is generally applied in such a way that the joint surfaces are made to bear the pressure used to overcome the contraction—the line of extension as ordinarily applied

forming one side of a triangle, the other two sides of which are parts of the thigh and leg, respectively. The resistance to be overcome lies in the flexors—notably the biceps. Again, we see a lever established whose fulcrum is at the joint surfaces, the use of which in extension produces joint pressure and directly favors sub-luxation of the head of the tibia backwards.

I have attempted to meet the pathological indications presented in knee-joint lesions with an apparatus which I devised sometime ago, and which has answered so excellent a purpose in many cases that I feel warranted in calling the attention of the profession thereto. Its design is to apply the desired force directly to the head of the tibia, throwing the

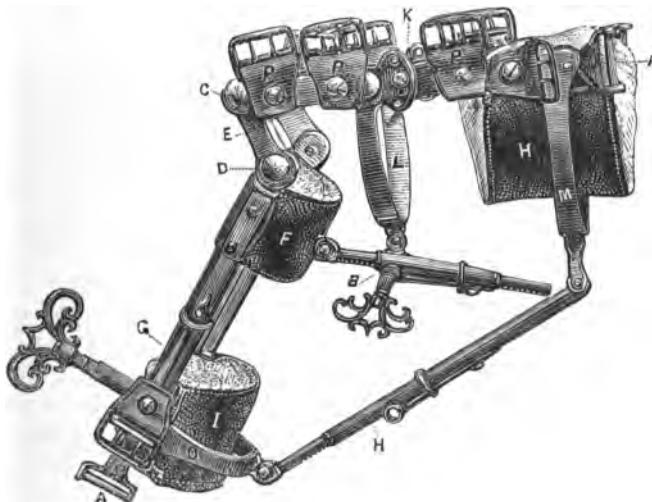


FIGURE 4.

same forward and downward by a simple movement. While we thus overcome the muscular contraction *in a direct line*, we relieve the joint pressure and overcome the deformity simultaneously. The apparatus is represented in figure 4. It consists of three principal parts; the thigh, leg and intermediate. The first two are secured to the limb by adhesive plasters which are attached at the points A, A. Extension is made with a key at the extension rod proper at B. The joints at C. and D. move upon pivots, and as the extremities of the apparatus are secured by their adhesive straps at A, A, the joint D moves forward and downward, describing the arc of a circle, the radius of which is the bar E. Pressure is thus made directly upon the head of the tibia by the band F, and this can

be very greatly augmented by using the extension rod at G, which further relieves the joint of pressure by additional extension in the position already acquired by the preliminary extension of the rod B. H is an accommodation—not properly an extension rod—which glides forwards as the extension is applied at B. As soon as the leg is thrown sufficiently forward, the accommodation rod is secured by a slide, and an extra turn of the key at B and G leaves the joint free from pressure, and with adequate



FIGURE 5.

extension applied directly to the contracted flexors. The thigh and leg bands at H and I move upon pivots so that they adjust themselves readily to any position, and at K there is an arrangement by which the curved bar L may be adjusted to suit the requirements of the extension rod B. The bars M and O are secured to the thigh and leg parts by double rivets. Through the buckles at P, P, P, webbing straps (padded) are passed, producing counter extension in addition to that secured by means of the adhesive straps. Figure 5 represents the apparatus applied. The Faradic

current applied to the muscles in diseases of the knee-joint, shows (so far as my experience goes) a decrease in contractility of the gastrocnemius, biceps, semi-tendinosus and membranosus, and also a slower reaction in the quadriceps.

The apparatus we have here described may be obtained from Mr. A. Muller, No. 161 West 29th Street.

No. 52 WEST 28th STREET.

A FORM OF OBSTRUCTION OF THE EXTERNAL AUDITORY CANAL.

BY
CLARENCE J. BLAKE, M. D., BOSTON.

In No. 2, Vol. IV, of the *Archives of Ophthalmology and Otology*, Prof. Wreden of St. Petersburg, describes a peculiar form of obstruction of the auditory meatus, of which, during the seven years preceding, he had seen twelve cases. The peculiarity of this form of impaction consists in its excessive toughness and its pertinacity of hold in the meatus auditorius, differing in this respect from the ordinary accumulation of cerumen, from which it is readily distinguishable. This peculiar obstruction is composed of exfoliated epidermis; its etiology is obscure, but it is evident, however, that the epidermis of the cutis of the auditory meatus and membrana tympani has been subjected to pathological irritation, to the product of which Wreden applies the term "keratosis obturans."

A somewhat similar, but more common form of occlusion of the external auditory canal may be worthy of mention, since it bears a greater resemblance to the simple impacted cerumen, which the general practitioner is frequently called upon to remove.

This form of accumulation in question, usually has a history of some form of irritation or inflammation of the external auditory canal, often that of a series of furuncles or of a sharp attack of diffuse inflammation which has, in time, passed away, leaving, apparently, to the patient, no trace behind it, until a sudden and possibly an extreme diminution of hearing leads to application for relief. A superficial examination in such a case reveals, apparently, a plug of cerumen filling the external auditory canal, but a further examination with the probe or forceps, which should be conducted only under sufficient illumination, and then with gentleness and care, shows that the dark brown mass differs in consist-

ency from the ordinary cerumen plug, being more pasty in character and intermingled with flakes of yellowish sodden epidermis ; the pasty mass is invested, moreover, with a thickened layer of epidermis, clinging closely to the surface of the lining of the canal and differing from the common investiture of old cerumen plugs, in that it is usually thicker, less readily separable from the lining of the canal, and more intimately united to the body of the mass which it encloses. A ceruminous mass, filling the external auditory canal, prevents elimination of the epidermis of the lining of the canal and outer surface of the membrana tympani, and in the course of time, as layer after layer is thrown off and retained in place by the cerumen, a sac is formed investing the original accumulation. The cerumen itself is very readily soluble in warm water, and after its removal by efficient syringing the membranous envelope may often be removed in toto, by means of the forceps, and bearing no little resemblance to the finger of a glove. In the class of cases forming the subject of this paper, the syringing with warm water has little or no other beneficial effect than the removal of the small quantity of cerumen which may have become impacted upon proximate surface of the original mass. This latter is, apparently, but little affected, even by prolonged soaking, except that the intermingled flakes or shreds of epidermis become swollen by absorption and the surface color of the mass changes from a brown to a dirty yellow. A fine blunt probe and a pair of slender, angular forceps, would seem to be the best instruments for the removal of a mass of this kind. Both should be used with great care and without causing pain, and the removal once undertaken should be conducted with as little interruption as possible, experience showing that after partial removal of such a mass, a delay of forty-eight hours is often sufficient to permit of the occurrence of a degree of swelling of the inflamed tissues, which will materially impede the removal of the remainder, and possibly permit the occurrence of an inflammatory process complicated and favored by the presence of a foreign body, which will rapidly increase in volume by the absorption of fluid. In removing the deeper seated portions of the mass, the anatomical relations of the parts and particularly the inclination of the membrana tympani to the long axis of the external auditory canal, should be especially had in mind, and a corresponding degree of care exercised. Indeed, since the presence of a mass of this peculiar character always implies an inflammation of the lining of the canal, and possibly, deeper seated trouble, its removal should be undertaken only by one skilled in the use of the proper instruments and acquainted with the relations of the parts in question.

Of several cases which have come under my observation, two which have recently presented themselves may serve to illustrate this form of impaction.

The first, a man thirty-six years of age, who had suffered as a boy from purulent inflammation of the middle ear, and more recently from a succession of furuncles in the external auditory canal, applied for relief from loss of hearing in the left ear, which had occurred suddenly a few days before. The patient had been riding in an open carriage, exposed to a cold wind, and on his return at night suffered from slight pain and a sensation of fulness in the left ear. On the following morning he awoke to find that he could not hear his watch when pressed upon the auricle.

Examination revealed, apparently, a plug of cerumen filling the external auditory canal. Syringing with warm water produced no effect beyond a slight discoloration of the water returned, and a change in the appearance of the mass from a dark brown to a dirty yellow, which, with a further examination by means of the probe, revealed the true character of the accumulation.

Patient manipulation with the forceps removed only small portions of the central, pasty mass, and it became necessary to adopt more expeditious means. For this purpose, a probe, tipped with cotton, was dipped in a saturated solution of carbonate of potash, formed by exposure of caustic potash to the air, and inserted in the centre of the mass ; the resulting saponaceous compound was then easily syringed away, and this procedure repeated, until the fatty matter being removed, the more tenacious was easily extracted with the forceps. The exposed lining of the auditory canal was found to be much reddened and somewhat swollen, at the inner end of the canal were several small granulations, and an old perforation of the membrana tympani, with a slight muco-purulent discharge from the middle ear, showing a recent inflammation of that cavity, originating, possibly, at the time of exposure in riding, which, had it progressed, might, but for the removal of the dense impaction, have led to serious consequences. The granulations and the middle ear disease were subjected to the usual treatment with good results and further improvement of the hearing.

In the second case, that of a young woman, twenty years of age, there had also been a history of previous ear trouble, indefinite in character, but that it was accompanied by a slight purulent discharge. Four years ago the hearing had become suddenly diminished, but was restored on the removal of a plug of cerumen by syringing. Three days

before coming under my observation, the hearing had again suddenly diminished, a watch previously heard at a distance of ten centimetres not being heard when pressed upon the auricle.

Examination of the left ear showed a small polypus, the size of a grain of wheat, on the floor of the auditory canal, near the meatus, and beyond this, a brownish, apparently, cerumenous mass. Syringing with warm water removed nothing, merely giving prominence to the epithelial constituents of the mass, and revealing its true character. It was removed piecemeal by means of the forceps, the deeper seated portion being more moist than the outer portion and composed principally of large flakes of epidermis, this condition being in part accounted for by the presence of a second small polypus at the inner end of the canal. The membrana tympani was considerably thickened and the surface of the canal reddened and swollen ; this swelling increased rapidly so soon as the pressure of the mass was removed. An examination of the substance removed in this class of cases shows it to correspond somewhat in character to that described by Wreden,* namely ; in all its layers dry cells of epidermis, countless layers of horny epidermis cells, and sparsely disseminated masses of cerumen and hairs from the auditory meatus. The two cases given are fair types of their kind and differ from those described by Wreden in that their etiology is usually sufficiently well marked by the history of a preceding inflammatory process, the existence of growths in the canal, which would favor the exfoliation of epidermis or the exacerbation of an inflammation of the lining of the auditory canal, which had previously been insufficient to excite special discomfort. The sudden deafness in those cases being caused either by a moistening and consequent swelling of the impacted mass, or by a swelling of the lining of the canal sufficient to close the small remaining opening, through which the patient had previously heard, more or less distinctly.

* With exception of a peculiar vegetable structure, found in one of the twelve cases, the nature and origin of which he is unable to explain.

TAYLOR'S APPARATUS FOR POTT'S DISEASE IN THE CERVICAL AND UPPER DORSAL REGION MOUNTED ON THE PLASTER OF PARIS JACKET.

BY
CHARLES P. PUTNAM, M. D., BOSTON.

In the Transactions of the American Medical Association, Prof. Sayre has described and figured an appliance for suspending the head in connection with the plaster of Paris jacket. The jacket of course only serves as a pedestal on which to erect what Prof. Sayre calls a "jury mast", but it certainly makes a very good pedestal.

Taylor's method of treating Pott's disease in the upper part of the spine is not, as is well known, to suspend the head and so draw the vertebrae apart, but to apply counter pressures on the chin and on the prominent vertebrae in such a way as to throw the weight of that part of the body which is above the diseased portion onto the articulating surfaces, and thereby relieve the bodies of the vertebrae.

The following has been found to be a simple and effective means of accomplishing this end.

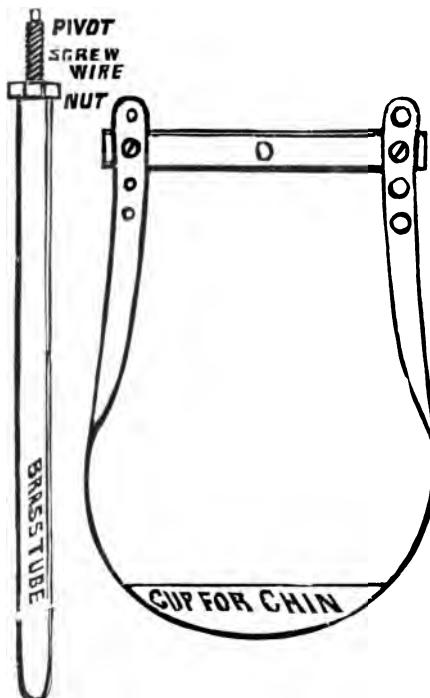
The plaster jacket is put on in the ordinary way except that a promontory is built up from it at the back quite onto the diseased portion of the spine, and in the process of construction a brass tube about a foot long and half an inch in diameter is imbedded in the back of the jacket and in the promontory. When the plaster has set a large screw wire nearly fitting the tube is slipped into it so far that the upper end of the wire is at about the height of the chin, and it is kept in this position or adjusted at will by a nut which is screwed down so as to rest on the end of the tube. The threads are filed off for about half an inch at the top of the wire to form a pivot for the chin piece or collar.

The collar may be of the simple efficient kind ordinarily in use with Taylor's apparatus, but one that is equally efficient, very easy to make and only a little less costly is composed of a short straight strip of iron or steel for the back part and a long strip bent into a bow or letter U for the front and sides. The straight piece has a hole in the middle to receive the pivot and a screw hole and screw at each end to attach the U piece, the ends of which are twisted so as to bring them into the proper plane. Several holes are drilled through these ends, those on one side being so large that they allow the head of the screw to pass through, whereby the collar is easily put on or removed.

The front part is finished to receive the chin in the usual manner.

The only advantages that can be claimed for this collar are its cheapness and more easy adjustability.

In practice this method of applying Taylor's apparatus has left nothing to be desired except that the plaster of Paris became in a few days rather



brittle. It was perhaps of poor quality, The difficulty was however overcome by covering it with a layer of bandages wet in silicate of potash, which has made it perfectly firm.

TRANSLATIONS.

DRESSINGS FOR WOUNDS.

A series of five Clinical Lectures delivered at the Charity Hospital, Paris.

BY

L. GOSSELIN, M. D., Etc.

Professor of Surgery in the Faculty of Medicine of Paris, Etc.

Translated from "*La France Medicale*" for the ARCHIVES OF CLINICAL SURGERY.

BY

BARNARD ELLIS, M. D.

(Continued from page 24.)

For the sake of clearness in explanation of facts, I shall divide the numerous modes of dressings into seven groups:

GROUP FIRST—PROTECTOR DRESSINGS.

In this first group, I shall class all the varied kinds of dressings which neither hinder nor provoke suppuration.

Before Ambroise Paré overthrew the employment of that most barbarous of all methods, the red hot iron for the arrest of hemorrhages, and replaced it by the ligation of the arteries, I say before this grand surgical reform, the dressings used to be especially compressors.

These were so placed as to fulfill the two indications of arresting hemorrhage and protecting the wound. Since this memorable epoch, certain as we were that we need no longer to fear hemorrhage, once the ligature was well applied, that we asked only one thing in the dressing and that was to protect well the wound. It was then that we turned to plasters, salves, and topical dressings of all sorts. The number of these agents was indefinite. Pharmacopeans seemed to take pleasure in increasing the number. The ancient surgeons, and principally the Arab surgeons, threw themselves with ardor into this study, and we must acknowledge that a year seldom passes during which our medical journals do not add to the number.

We may range in this group some form of bathing, immersion, applied particularly by Mayor, of Lansanne, by Langenbeck, and by Valette, of Lyons; the method of incubation extolled by Guyot, and that by continued baths by Le Fort.

But all these successive and varied forms of dressings were based upon an imperfect knowledge of what was required, * * * * we need more simplicity, * * * * we must learn that nature supplies the cost of cicatrisation, and that the only duty of the surgeon is to *prevent* everything that interferes with natural processes.

So we leave the innumerable host of salves; the apostles' salve, the

golden, the white salve, the basilicum, etc., etc., and pass on to our
SECOND GROUP—SUPERFICIAL SUTURES.

Towards the end of the eighteenth century, the English surgeons finding themselves forced to bring to amputation wounds, cure by first intention, united simply the borders of the wound, and sometimes succeeded in giving to the solution of continuity the advantages of immediate cicatrisation. Their efforts were soon crowned with success, and in such a manner that this proposition is justly considered as one of the most brilliant pages of English surgery. But in France this new practice was seldom used, the surgeons refusing to adopt it, and it was necessary for Roux to go to London in 1814, and bring back with him the surgical method.

The same thing happened then as did more recently to the dressing of Lister. Roux, in relating his experiences, which were published in 1815, eulogised in the most exalted way this mode of treatment, making, however, this reservation, that on the other side of the channel it was carried to excess.

However that may have been, he did really import it into France, and during the next twenty years our surgeons, seized with a sort of infatuation for a treatment which they had at first repulsed, employed it generally for all amputation wounds. * * * * * It was soon seen, however, that this healing by first intention, at the borders of the wound, did not bring with it cure, without suppuration. * * * *

Exceptionally, the deep parts of the borders might heal together, but the cases are so rare as scarcely to permit us to hope for it. Most often there is no reunion. A violent inflammation seizes upon the deep parts and step by step soon invades all the parts, till reaching the lips of the wound, it disorganizes the work of union possibly commenced there.

Or, indeed, the lips may have nearly attained union, but the deep parts not participating in this work of organization, becomes a veritable focus of infection, a receptacle for those putrid products, which, if absorbed, bring in their train the terrible accidents of pyæmia.

In the face of such unfavorable results, we renounced, under the impulsion and instigation of Bérard, of Denonvilliers, and of Nelaton, this method of dressing, and to-day its only partisans in France are the surgeons of Montpellier. You will find related, in fact, in the thesis of Dr. Dubrueil, formerly *agréé* professor in our Faculty, and now professor of Clinical Surgery at Montpellier, the practice of Doctors Alquié, Bonsson, and Courty, who still follow this method.

Still, it is proper to say, Dr. Dubrueil, who is better able than any

other man to judge this practice, recognizes clearly the fact that the surgeons of Montpellier have not much to congratulate themselves with in this immediate reunion, which succeeds by exception, miscarries almost always, and leaves only a determination to erysipelas or purulent infection. In a word, this tentative, this experimenting upon immediate reunion ought to be repelled in all cases of capital operations, at least in our hospital practice, and we must return to our protector dressings. In this group also ought to be found a place for the method of O'Halloran, named by him, *secondary immediate reunion*, a method born of these exclusive methods, and participating at the same time of the first by bringing together the edges, and of the second by suppuration, which is allowed to establish itself before juxtaposition of the edges is made.

It is a method which presents important advantages, and, thanks to which, we are enabled to bring to the most of wounds in good condition, primitive reunion, without exposing them to the grave complications which are liable to accompany them. We would not adopt this method by election, but it is well to preserve it, particularly in those cases where it is necessary that suppuration should intervene to eliminate foreign bodies; scabs, and all altered tissues.

It was out of the researches for means to withdraw from wounds all accidents of pyæmia that came the employment of alcohol, and now we arrive at our

THIRD GROUP—ALCOHOLIC DRESSINGS.

Professor Nelaton was the first to recognise this practice. One of his pupils, Dr. Chédevergne, made it the subject of a paper which it is interesting to consult, and since then a good number of surgeons have followed the practice, and have obtained the most favorable results. Doctors Guyon and Dolbeau, among others, are strong partizans of it.

Generally, we use 90 per cent alcohol in which to soak the lint pad. Dr. Delens, in a recent work, advocates the use of camphorated alcohol, at a density of 53°. My own opinion is, that we should use the 90 per cent. Howsoever that may be, here are the appreciable effects of this dressing: 1st, the patient has little febrile reaction; 2^d, traumatic fever is nearly nil; 3^d, contact of the alcohol with the surface of the wound gives only moderate and very supportable pain; 4th, no swelling of the edges of the wound; 5th, no redness; 6th, no appreciable heat, and, principally, no putridity in the deep parts.

These remarkable effects are not absolutely true in every case, but I cannot too often state to you that there are no absolute results from any of the divers modes of dressings, which we shall study, but in the sum total,

this is the kind which we find resulting best in the great majority of cases.

How does alcohol act? It is very difficult to give a clear and precise answer to this question, and is, perhaps, sheltered from criticism. Alcohol is ranged among the agents which coagulate albumen. This property is undeniable. But is it as a coagulent that it acts when it determines a coagulum in the mouth of a vessel, or, when it produces on the surface of the wound that greyish white pellicle which is characteristic of this dressing? We cannot precisely say; we only can state the fact and that is all. On the other hand, Dr. Chédevergne observed that it had a disorganizing influence on pus globules, as the microscope easily demonstrates, and Dr. Dubrueil, who has repeated these experiments, is well assured of the fact.

From the moment that I admit that alcohol determines coagulation of albumen, I do not hesitate to range it in the same group with perchloride of iron, it also producing coagulation at the surface of a wound and in the vessels. Dr. Bourgarde has obtained good results from it in the Hospital Clermont-Farrand; and for myself, I experimented with it in 1869, and found also good results. But this wound, upon which we apply alcohol, how does it act? What becomes of it?

To become completely cicatrised, a wound must pass through the period of the pyogenic membrane. Now, as alcohol retards the formation of this membrane, definite cicatrisation is long in establishing itself; and at the side of the legitimate satisfaction we feel in seeing our patient escape the accidents of the first period, contrarywise we see the days slip away without any definite work of healing being effected, and we soon find ourselves obliged to change the dressing, and to employ, for example, glycerine, which favors the development of this pyogenic membrane. I know well that alcohol determines precisely this immediate reunion of which I have spoken, but it will not provoke it, except in wounds of small extent, and particularly in wounds of the head.

Alcohol is then more often insufficient, and it became necessary to look for some other dressing which would moderate the accidents of the second, or period of suppuration. Some surgeons, amongst others Dr. Jules Guérin, insisted upon the dangers of contact with air, and had the idea that we must treat wounds inevitably, fatally destined to suppuration, by a local application that would exclude the air.

FOURTH GROUP—DRESSING BY PNEUMATIC OCCLUSION AND CONTINUED ASPIRATION.

Exclusion of air and continued aspiration constitute the features of this group.

Dr. Jules Guérin, about 1866, devised a plan for overcoming the grave imperfections of the usual methods of cure by occlusion, which methods were never perfect, but left the liquids and gases exuded by the wound, to remain in contact with it and become altered, and to remain in the bandages.

This plan was to envelope the parts exposed to the air, in a sheath of impermeable tissue, through which he emptied these products by means of a pump.

Dr. Guérin's first idea was to suppress suppurative inflammation of wounds, and to bring them to the morbid type of sub-cutaneous wounds. But after all, gentlemen, it was only an idea, which the author was soon forced to abandon. It was then that Dr. Maisonneuve justly insisted upon the value of continuous aspiration, and in a paper which he read to the Academy of Sciences at the meeting of the 4th of November, 1867, he set forth the method and the apparatus necessary to fulfill these indications.

Surgery believes that the liquids which are poured from wounds, die in contact with the air ; alter, putrify, and become poisonous agents, and to guard against this fearful complication, he submitted these liquids to a constant call ; a continued aspiration, removing them as soon as they accumulated, or certainly before they had time to putrify.

This method was not adopted, but it was a halting place famous in the history of dressings. Under its influence all those complicated apparatuses which brought to wounds exaggerated pressure, considerable oedema of the parts above the stump, etc., fell into disuetude. But I shall show you that this dominant idea of shielding wounds from contact with the air, was, by itself, rich and secund in results.

We touch in fact the study of the processes which seem to have brought a real revolution, a happy and propitious one, to surgical science.

FIFTH GROUP—DRESSINGS OF WADDING, OCCLUSIVE AND COMPRESSIVE.

This dressing, originating in France, and based upon remarkable and eminently French discoveries ; a method which by itself constitutes our 5th group, was soon crowned with success, bringing with it the happiest results.

I now go to speak of the occlusive and compressive dressing of Doctor Alphonse Guérin.

First and briefly, how is it applied ? Secondly, we will study its appreciable effects, and the theory upon which it is based. * * * An amputation of the thigh, for example, * * * haemostasis complete ; ligatures properly applied, * * * the wound washed and wiped dry, * * * opera-

tion has been performed in a private room, distant from the public wards ; *** a large quantity of wadding has been made ready, which was never in the general wards, and which is taken from an oven as hot as possible. With layers of this wadding we plug perfectly the cavity of the wound. Then we secure the plug by layers of the wadding applied so as to overlie each other on the circumference of the member ; then, other layers rolled around these as far as the crease of the groin, and also around the pelvis. Dr. Alphonse Guérin says : that the parts when covered with cotton should be at least three times their normal dimensions. The whole mass is held in place and compressed by roller bandages.

In applying these bandages it is necessary to use great force, particularly at the finish of the dressing. While it is necessary that compression should be exercised progressively, it ought at the same time to be made slowly, without shock or jar, and in a uniform manner. The application is to cease when the wadding no longer yields to pressure.

This dressing should remain in place for twenty to twenty-five days. At this period it is renewed, and after two or three successive applications the patient is cured.

Its appreciable effects are surprising. The inflammatory period is moderate, and sometimes is escaped. The appetite and sleep are in many cases as well preserved as before the accident. Enthusiasts say there is no pain. This is exaggeration. Pain exists, but is modified ; and, we must add, is much less than under any other form of dressing. When we remove the dressing for the first time, we are utterly surprised at what we see. The layers of wadding near the wound are strongly adherent ; the last cake, formed like a sort of capsule, on being raised, discovers a very small quantity of creamy, well thickened, laudable pus, without a shade of appearance of putridity, giving out an odor somewhat sour, but not repulsive, and which we may compare to that of old grease. The wound is covered in all its extent with a superb, vermillion colored, granulous pyogenic membrane, which covers and hides the bone as entirely as the other tissues.

To sum up, it is a dressing which gives us cicatrisation after suppuration, but which diminishes it in a surprising manner. Now, what are the principles upon which this method rests, the happy results of which I have shown you ? It is as you have already foreseen, but a continuation of the theory of Dr. Jules Guérin.

In both methods, air is considered as an evil, noxious and pernicious, from contact with which it is necessary to protect the wound. You will

remember Dr. Jules Guérin's theory and we shall not return to it. But, Dr. Alphonse Guérin thought the air not hurtful in itself, but only through the miasms it contained, the existence of which was so thoroughly recognized by Dr. Pasteur, and which when in contact with organic products, became changed into moving elements ; I will not dare to go so far as to say living elements. Inspired then, by the admirable researches of my honorable colleague in the Academy of Sciences, Dr. Guérin covered wounds with wadding in thick masses, well compressed, in the end to filter the air, to sift it, and thus arrest the passage of any of these myriads of germs with which it is loaded, to withdraw the wound from their contact, and thus to prevent all fermentation from being produced ; so, in a word, as that the pus will show no trace of these mobile elements, these vibriones about which so much noise has been made.

Well ! gentlemen, I do not hesitate to say that I am not of this opinion, and for us, things do not fall out thus.

I have seen very clearly and undeniably, vibriones in the pus of these dressings on the twenty-fifth day. Dr. Pasteur has stated the same thing ; and at the Hotel-Dieu Hospital, Dr. Alphonse Guérin found them upon dressings applied by himself. I have recognized their existence many other times besides, and yet the results were favorable, happy ; and the wound, superbly vermillion, progressed towards cicatrisation without accident or complication.

I do not invoke the germ theory, as do Doctors Guérin and Pasteur, to explain the legitimate success which this dressing enjoys among us, and which is, I repeat, an excellent dressing. My opinion is, that it acts by its efficacious protection, by the compression exercised, and, also, because it is uncommon, and you know the importance I attach to the rarity of dressings.

(To be continued.)

PROGRESS OF SURGERY.

SEMI-ANNUAL REPORT IN PRACTICAL DERMATOLOGY.

BY

HENRY G. PIFFARD, M. D.,

Professor of Dermatology in the University of New York, Surgeon to the Charity Hospital, etc.

Therapeutical Notes, collected at the Dermatological Clinic of Prof. Hardy, by Dr. E. Ory.—(Notes de Therapeutique, etc. Paris, 1877.) This little tract of forty pages contains many useful hints and admirable formulæ, collected at the largest dermatological clinic in Europe. From among those given we select a few of the most important.

Trichophytosis.—After epilation, if the disease is located upon the scalp or in the beard, the following ointment is to be applied night and morning :

Rx	GRAMMES.
Camphorae, - - - - -	1. [gr. xv.]
Hydrarg. sulph. flav., - - - - -	2. [Θiss.]
Cerati, - - - - -	30. [ʒj.]
M.	

If the affection is on the general surface, the following will often suffice :

Rx	GRAMMES.
Potass. carbonat., - - - - -	0.25. [gr. iv.]
Sulphuris, - - - - -	0.50. [gr. viii.]
Cerati, - - - - -	30. [ʒj.]
M.	

Phytosis or Pityriasis Versicolor.—Sulphur baths or ointment will usually suffice :

Rx	GRAMMES.
Sulph. sublimat., - - - - -	2. [Θiss.]
Cerati, - - - - -	30. [ʒj.]
M.	

Scabies.—The duration of treatment has been reduced by Hardy to a few hours. The patient is first rubbed all over the body with soft soap and warm water, the friction being kept up for twenty minutes. A warm bath of forty minutes duration is then taken. After drying, the following ointment

℞	GRAMMES.
Potass. carb.,	25. [ʒvj.]
Sulphuris,	50. [ʒxiv.]
Ungt. simpl., M.	300. [ʒx.]

is thoroughly rubbed in, after which the patient is put to bed until the following morning. The next day an emollient bath removes the ointment and the dead acari. If the skin is still irritable, emollients should be employed for several days.

Anti Pruritics.—In pruritus pudendi, scroti, etc., and in other pruriginous affections, Hardy employs the following :

℞	GRAMMES.
Hydrarg. bi-chlorid,	1. (gr. xv.)
Alcohol,	q. s.
Aq. destil.	120. (fʒiv.)
M.	

A teaspoonful to be added to a glass of water, and the affected parts bathed with the lotion several times a day.

℞	GRAMMES.
Chloral. hydrat,	1. (gr. xv.)
Glycerini,	(fʒvss)
Aq. destil.,	aa. 25. (fʒvii.)
M.	

℞	GRAMMES.
Sulphuris,	5. (gr. LXXX.)
Emuls. amygdal,	250. (fʒviii.)
M.	

℞	GRAMMES.
Hydrarg bi-chlor.,	-
Ammon. Hydrochlor.,	aa, o. 25 (gr. iv.)
Emuls. Amygdal,	250. (fʒviii.)
M.	

℞	GRAMMES.
Sulphuris,	4. (ʒi.)
Gum. acaciae,	5. (gr. LXXX.)
Al. amygdal. dulc.,	8. (fʒii.)
Aq. lauro-cerasi,	10. (fʒiiss.)
Syrupi simp,	30. (fʒvii.)
M.	

One or another of these lotions may be applied night or morning.

Urticaria.—In chronic Urticaria, Hardy sometimes uses the following :

Rx	GRAMMES.
Soda Arsenitis, - - - - -	10. (gr. iss.)
Soda bi-carbon, - - - - -	15. (3ss.)
Aquæ., - - - - -	400. (f3 xiv.)

M.

A tablespoonful in a glass of water before breakfast and after dinner.

Scrofulous Ulcers.—In addition to internal treatment, the following may be applied locally.

Rx	GRAMMES.
Plumbi. oxid, rub.	- - - - -
Hydrag. sulphid, rub.	aa, 1. (gr. xv.)
Cerati,	30. (3j.)
M.	

If a more energetic application is required, the following is used :

Rx	GRAMMES.
Iodini, - - - - -	1. (gr. ii.)
Potassii iodidi, - - - - -	3. (gr. xlv.)
Aq. destil,	30. (f3i.)
M.	

In Ganglionic engorgements, Hardy uses :

Rx	GRAMMES.
Camphoræ, - - - - -	1. (gr. xv.)
Ext. conii, - - - - -	2. (3iss.)
Ungt. simpl.	30. (3i.)
M.	To be well rubbed in.

Local Treatment of Psoriasis.—Mr. Cottle (*Lancet*, Sept. 30, 1876,) recommends a solution of india-rubber, made by dissolving half an ounce of india rubber in eleven and a half ounces of chloroform. He has found it useful in chronic cases of psoriasis, where there is an excessive formation of dry scales, especially in the neighborhood of the joints. The crusts and scales being removed, and the absence of grease insured by wiping the parts with ether, and the skin dried, the solution is applied with a brush, and the application renewed as often as is needful to maintain a continuous covering over the affected skin. He has met with more rapid recovery in these cases by this application, than by the ordinary local measures. He thinks the same treatment is applicable to some cases of chronic eczema.

Treatment of Psoriasis.—Dr. Dowse (*The Practitioner*, Nov., 1876,) treated a case of extensive and inveterate Psoriasis in the following manner: The patient, a young woman, "was kept in a blanket bath for six hours, (the bed was covered with a large piece of india rubber sheeting, and upon this was placed a blanket, wrung out of hot water, in which the patient was firmly packed, and then covered with eight blankets,) and allowed to drink freely of iced water: She said it made her feel rather sick and uncomfortable, but the respiration and circulation were never interfered with, neither did the temperature rise above 100°. When she was removed, all the scales had disappeared, leaving the body of a lobster redness. She was then enveloped in rubber sheeting, which was bandaged close to her body. By this process the Psoriasis might be said to have been converted into an eczema, for there was profuse discharge with tendency to scabbing. In a day or two, the scabs disappeared, but not to the same extent." The patient was again packed on the tenth and sixteenth days, and in three weeks from the beginning was entirely well.

Treatment of Erysipelas.—Dr. Charles Bell (*Edin. Med. Jour.*, Aug. 1876,) believes that the failure which many experience in the use of the muriated tincture of iron in erysipelas, is due to the fact that it is not usually employed in sufficient doses. He recommends that it shall be given in twenty drop doses, every two hours, day and night. When thus used, he says, that it is a certain and unsailing remedy.

Treatment of Sebaceous Tumors.—Dr. B. N. Hamilton (*Med. & Surg. Reporter*) punctures the tumor with a bistoury, sufficiently to allow escape of its contents, which are carefully pressed out. He then injects tincture of iodine until the sac is distended to its original dimensions. It is allowed to remain for five minutes and then to escape. After a week, a second injection may be necessary. In six cases thus treated, cure resulted in the three cases from a single injection, and in the other three cases from two injections. He says: "Make the puncture no larger than is necessary to allow escape of the contents of the tumor and the admission of the nozzle of the syringe. Empty the cyst of its entire contents. Distend the sac as much as possible, moving the point of the syringe in different directions, so as to bring the fluid in contact with every portion of the cyst wall."

Treatment of Acne.—Chantry (*Lyon Med.*, June, 1876,) uses with benefit iodide of sulphur in the severer forms of rosaceous acne. He gives it in pills, each containing 0.03 (gr. ss.) iodide, and 0.12 (gr. ij.) extract Dulcamarae. Locally he uses:

R

GRAMMES.

Potassae sulphid,	-	-	-	-	-	-
Tinct. benzoin,	-	-	-	-	aa. 4.	(3 <i>i.</i>)
Aquaæ,	-	-	-	-	100.	(13 <i>iii ss.</i>)

A dessert spoonful is added to a glass of warm water and applied twice a day. (We have seen decided benefit follow the internal use of iodide of sulphur on indurated arne, but have rarely been able to employ it in doses exceeding 0.005 to 0.01 (gr. 1-10-1-6) without producing gastric disturbance. Externally in the form of ointment it has been used for many years.—REP.)

Treatment of Bromidrosis Pedum.—Kuester (*Deuts. Zeitsch. F. Pract. Med.* No. 82, 1876,) employed successfully :

R

GRAMMES.

Acid salicylic,	-	-	-	-	8.	(3 <i>ij.</i>)
Talc	-	-	-	-	15.	(3 <i>ss.</i>)
Amyli,	-	-	-	-	10.	(3 <i>iiiss.</i>)
Saponis,	-	-	-	-	4.	(3 <i>j.</i>)

The feet are thoroughly washed and dried and the powder is dusted over them, and between the toes, and some put in the stockings.

Ortega (*Bul. Gen. de Therap.*, Feb. 29th, 1876,) in the same affection, recommends the use of a one per cent. solution of chloral hydrate. For a long time the Ungt. diachyli (Hebræ) has been successfully used in bromidrosis pedum and other affections. This ointment, however, is troublesome to make, and soon becomes rancid. As a substitute we have for some time past used the following, as it may be made in any quantity and keeps indefinitely :

R

Emplast plumbi,	-	-	-	-	-	-
Vaseline,	-	-	-	-	aa, q. s.	

M.

Melt the two together with a gentle heat, mix thoroughly and stir till cold. It is to be applied to the feet twice a day.—REP.)

Tattooing of Naevi.—Sherwell (*Archives of Dermat.*, April, 1877,) "takes a number of fine sewing needles, first sharpening and somewhat roughening their cutting edges with a fine flat file, at and for a short distance from their points, and then by means of heavy sewing machine silk, well waxed, wrapped around the upper two-thirds of each in turn, and all together, forms a fasces-like bundle, the points being somewhat less than an inch apart." When prepared, he takes a saturated or 50 per cent. solution of carbolic acid, or a 25 per cent. solution of chromic

acid, in a shallow vessel, and dipping the points of the needles therein, makes a series of punctures into the skin of the affected region. After the usually slight bleeding ceases, he wipes off the part with a little alcohol and quickly applies several layers of collodion. (The method here detailed is simpler than that of Squire, noticed in our last Report, and is probably as effective. REP.)

HOSPITAL RECORDS.

PENNSYLVANIA HOSPITAL, PHILADELPHIA.

REPORTED BY JOHN B. ROBERTS, M. D.

DELIRIUM TREMENS IN SURGICAL CASES.

There are, of course, many cases of injury admitted in which delirium tremens occurs as a complication and demands treatment. Whether the chief cause of delirium in drunkards be the toxic effect of alcoholic stimulation carried to excess, or the sequela of an abrupt cessation from all stimulus after prolonged indulgence, is a difficult question to solve. The experience in one of our reformatory institutions here, in Philadelphia, seems to prove that these nervous phenomena are the result of the continued use of alcohol, combined with the ill-nutrition depending on the disordered gastric functions; for the treatment carried out with all inebriates is to immediately require absolute abstinence, instead of the gradual withdrawal system, and to attend carefully to re-establishing the digestive processes. Such is the usual practice in the Pennsylvania Hospital, in the alcoholism wards, and the cases of mania following this enforced teetotalism are rare, though the number of alcoholism cases admitted is quite large.

It is a fact, however, that the disease in surgical cases generally develops 36 or 48 hours after the injured patients are taken into the wards; and it may therefore, be asked, whether the old practice of giving all drunkards with severe injuries a fair allowance of whiskey immediately after admission, to keep them steady, was not a good treatment, even if the moral propriety be questionable. On the whole, however, when it is recollected that in hospital practice the large majority of the inferior classes treated for surgical affections are habitual tipplers or debauchees, receiving their injuries while intoxicated, the number of instances of traumatic delirium tremens certainly ought to be greater than it is, if the abrupt cessation of drinking, resulting from hospital discipline, was the main factor in the cessation of this disease. It would rather seem, then, that traumatic mania a potu is dependent upon a disturbance of nervous equilibrium from the shock of injury, operating on a patient of great nervous susceptibility, resulting from previous alcholic indulgence.

The treatment ordinarily adopted in such cases at this hospital is to give no stimulus, except in rare instances, but to administer moderate doses of chloral and bromide of potassium to those who show great nervous agitation after receipt of injury, and to attend to the nutrition of the patient by feeding him upon beef tea and other nourishing and easily digestible food. If mania develops in spite of these precautionary measures, the above drugs are increased in quantity, to say; chloral, gr. x, bromide of potassium, gr. xxx, every two or three hours, and in addition a fair dose of morphia or opium is administered at bed time. As the disease seems to be inclined to self limitation, there will not be much amelioration of symptoms under treatment, until the second or third night, when the soporifics apparently act favorably by aiding nature, and the patient sleeps quietly, awakening free from hallucination. In nearly all surgical cases of this sort, restraint is demanded, and in cases of fracture it is almost always well to apply some variety of fixed dressing, of which the plaster, of course, hardens most rapidly.

Recently some cases have occurred in which the active delirium with its hallucinations has been developed twice; occurring at first about two days after admission and disappearing under the usual treatment; but two or three days after convalescence, suddenly occurring again as violent as ever. Some other cases have been interesting, in that there has been intermittent delirium for several weeks; the patient delirious for twenty-four or forty-eight hours, then becoming well, so that all medication was stopped; but, after a day or two of perfectly clear intellect, lapsing again into the same delirious mutterings and restlessness. This cycle being repeated over and over again, but the patient making a final recovery. These all seemed to be cases of delirium tremens, and not febrile delirium, as it may occur in any person with acute disease.

An interesting symptom that occurred in two cases of non-traumatic delirium tremens, recently treated, was the high temperature of the patient just before the fatal issue. In both instances, the axillary temperature reached 108° F. before death, which occurred by coma. This occurrence may not be as rare as it seemed at the time, but it has certainly not been given much prominence.

ALBANY HOSPITAL, ALBANY, N. Y.

REPORTED BY MAURICE J. LEWI, M. D., Resident Physician and Surgeon.

TUMOR IN THE KNEE-JOINT—SERVICE OF PROF. A. VAN DERVEER.
F. C., aged 54; single; farmer; habits good; remarkably well pre-

served for a man of his age. Admitted to hospital, Oct. 7th, 1876. Twelve years ago while driving logs off his farm, the horses becoming unmanageable, threw him from his seat on the wagon to the ground, and against the stump of a tree which had been felled. A deep gash was made just below the lower border of the patella. He applied a bandage to the knee and went about his work, experiencing no unpleasant symptoms. Seven years after this time, he noticed a very slight swelling above the point of the injury, but did not pay much heed to it. Continuing, however, in its growth and becoming very painful, two years ago, he applied for relief to a physician in Utica, who ordered it painted with tincture of iodine. The growth of the tumor now apparently ceasing, he neglected it ; but a year ago he noticed that it impeded his walk, incapacitating him for work. On above date he entered hospital for treatment. An operation for removal was decided upon, and a few days after admission it was consummated, Lister's anti-septic treatment being faithfully carried out. The capsule of the knee-joint was opened into, and a neuroma, involving also the edges or fringes of the semi-lunar cartilages was removed, the tumor in all weighing four drachms. The wound was closed, and Lister's anti-septic gauze, lint, etc., was applied.

The limb was tightly bandaged and kept perfectly straight. Ten days after the operation the dressings were removed ; the parts had united firmly without the formation of any trace of pus whatever. Patient was discharged at the end of the fourth week, having the free use of the knee-joint.

His attending physician, Dr. O'Hara, of Utica, writes Feb. 18, 1877, "that Mr. C. has free motion of the knee-joint ; is able to draw up the foot while sitting, beyond a right angle ; while extending the leg, he can, with very little effort, raise the foot higher than the pelvis. The rotary motion is rather constrained. He walks very free and with perfect ease, using no cane ; complains of no pain, and feels very grateful over the excellent result. The knee-joint just at and above the incision, is very tender to the touch, but outside this spot is hard and free from any soreness.

REMARKS.—This case is in many respects a remarkable one. The little disturbance resulting from opening into so important a structure as the knee-joint is, indeed, a triumph for modern surgery. The perfect recovery and usefulness of the joint resulting. The patient from pain, idleness and suffering being returned to his work, is another evidence of surgery being at times able to cure and not always to mutilate.

AMPUTATION OF THE NECK OF THE UTERUS—SERVICE OF PROF. VAN DERVEER.

S. M. B., aged 40; born in United States; married; one child, nineteen years old; after that a miscarriage. Patient had been troubled with great sensitiveness of the uterus for three years, making copulation painful, straining at stool also caused great pain. Admitted into hospital Feb. 26th, 1877. On examination, the walls of the os and cervix were found to be very much thickened, hardened and longitudinally hypertrophied. Amputation was decided upon. Two days after, in the presence of the hospital staff, Dr. Van Derveer, with the galvano-cautery, removed an inch of the neck of the uterus, with no hemorrhage. Patient improved rapidly and was discharged March 9th, 1877, convalescent. On examination of the amputated portion, between the fibres was found densely distributed, a fibro-plastic material. The lesion constituted an hyperplasia of Virchow. At present writing, patient is very comfortable, and a healthy cicatrix has formed.

This patient had received from her attending physician the best of treatment as to local applications, cupping, etc.; yet, nothing seemed to give her any permanent good. The menstrual periods since the operation, (now June 1st, 1877,) have been more comfortable and natural than for years. There have been some profuse granulations from just within the new external os, but these have disappeared by applications of caustic and pressure. Dawson's battery was used.

GLANDULAR POLYPI OF THE NECK OF THE UTERUS—SERVICE OF
PROF. J. P. BOYD, JR.

A. G., aged 31; single; domestic; admitted to hospital, Dec. 27th, 1876, for relief from menorrhagia and dysmenorrhœa. Complained greatly of pain in the back, in the region of the kidneys; was unable fully to empty the bladder. The catamenial flow came on every three weeks, lasted from eight to ten days, and then left the patient in a weak and dejected condition. The attending physician for diseases of women, Dr. Boyd, Jr., was called in, and at once surmising the cause of the difficulty, made an examination, and discovered a small polypus fastened by a loose pedicle to the mouth of the uterus; also, a retroflexion of the entire organ. A few days afterward, with the ecraseur, the growth was removed. The following month the catamenial flow came on without any pain, lasting but four days. Two weeks from this time, however, they returned as severe and painful as ever before. The os was now dilated by means of a sponge tent, and upon examination the whole neck of the uterus was found studded with these mucous growths. By means of the vulsellum scissors as many as could be reached were re-

moved. Astringent washes were applied—sol. per sulphate of iron—as also; carbolic acid, 3 gr. ad. $\frac{3}{4}$ i, morning and night. Patient improved at once, and was discharged March 17th, 1877, cured, but still under surveillance.

BELLEVUE HOSPITAL, NEW YORK.

REPORTED BY S. O. VANDERPOEL, JR., M. D.,

FRACTURE OF THE ODONTOID PROCESS—PROLONGATION OF LIFE FOR SIX AND A HALF MONTHS.

Frank Tinervian, aged 21; single; United States; admitted October 12th, 1876.

Two weeks before admission patient fell from a wagon, striking heavily on the back of his head. Since that time he has been unable to bend his neck or turn his head, but keeps it all the time in an exceedingly erect position. Examination disclosed a peculiar deformity of the back of the neck, making it appear as if several vertebrae were displaced forwards. A closer examination caused the visiting surgeon to decide that only one vertebra was affected, the fourth cervical, which he supposed to be fractured through the right lamina, the fragment being dislocated to the right.

The patient was advised of the necessity of keeping very quiet and avoiding all sudden motions, and as he seemed inclined to take proper care of himself, he was allowed to sit up all day.

Oct. 21st. As patient complains of a great deal of pain in the muscles of the neck, from his constrained position, he was ordered unguent. belladonna.

Oct. 26th. His neck is still very painful, but less so than before the application of the belladonna ointment.

December 4th. All motion of the neck is painful. He has neuralgic pains about the shoulder and neck. Collodion vesicant was applied.

Dec. 6th. His pain has not been very much relieved.

January 3d. Patient has had two or three falls and jars, but they have not caused any harm to his neck.

April 12th. He has been quite comfortable for the last two months. The pain he had in his neck on the 6th of December, was relieved by the continued use of belladonna ointment, and since then he has not complained. He has been doing general work in the ward until to-day, when he complained of great pain in his back and arm and was put to bed.

April 13th. It seems that the pain in the neck has been coming on for four days, gradually increasing in severity. 9 a. m. Is complaining of intense pain, paroxysmal in character, in his neck. There is hemiplegia of the right side with general anaesthesia of the right arm, which is congested and oedematous. 1 p. m. There is now dysphagia, and diaphragmatic respiration, the thoracic respiration being suspended. Any movement of the body is referred with great pain to the neck. Patient assumes the left decubitus. The bladder and rectum act normally. Treatment, eight leeches, and a blister to the neck, with hypodermics of morphia. Pulse 52 and irregular, respiration 32.

April 14th, 6 a. m. There is complete paralysis with general anaesthesia. The patient is cyanotic, and there are no respiratory movements of chest or abdomen. At 7.45 a. m., he died of apnoea.

Autopsy. Twelve hours after death. Thorax, abdomen and brain not examined. The cervical vertebrae were all removed, when it was found that there was a fracture of the odontoid process, transverse in direction, below the articular facet which articulates with the axis. The transverse ligament was intact, and the upper fragment of the odontoid was held in place by it, and thus prevented from pressing against the cord. No dislocation or other fracture was found. The cause of death was meningitis of the cord, produced by caries of the axis. The deformity of the neck was due to muscular contraction, holding the odontoid away from the cord.

REMARKS.—This case is one of more than ordinary interest on account of the extreme rarity of the accident, and the length of time that the patient survived after it. Prof. Willard Parker reported a similar case in the *New York Journal of Medicine* for March, 1853, the patient living for five months after the receipt of the injury, and during all that time, still continuing to follow an active occupation. In the same interesting paper, four other instances are mentioned and two of the cases given in full. These cases go to prove that fracture of the odontoid process is not necessarily immediately fatal, as it is commonly supposed to be.

BIBLIOGRAPHY.

ANALYTICAL AND CRITICAL REVIEWS.

Transactions of the American Gynecological Society, Volume I, for the year 1876. 8vo., pp. 396. H. O. Houghton & Co., Boston. 1877.

This volume contains the papers which were presented to the Society at its first annual meeting, held in the Academy of Medicine, New York, Sept., 1876, and embraces a number of monographs by the most distinguished gynecologists of the country. It is not our intention to criticise the views which are advanced by the several contributors, but we think that the volume demands the hearty support of every member of the profession. It is, undoubtedly, the finest volume of transactions that has ever been published in this country, and we think we are safe in saying, that it has few equals and no superior among the many admirable similar works that have been published by the European societies. The more important papers in the volume are as follows:

Etiology of Uterine Flexures, with the Proper Mode of Treatment Indicated, by Thomas Addis Emmet, M. D., of New York.

Extrication of the Functionally Active Ovaries, for the Remedy of Otherwise Incurable Diseases: by Robert Battey, M. D., of Georgia.

On the Relations of Pregnancy to General Pathology: by Robert Barnes, M. D., of London.

Latent Gonorrhœa, with Regard to its Influence on Fertility in Women: by Emil Noeggerath, M. D., of New York.

The publishers have presented the volume in a very handsome style; it being printed on heavy tinted laid paper; thus making it an ornamental as well as very useful addition to a physician's library.

How to Use the Ophthalmoscope: by Edgar A. Browne, Surgeon to the Liverpool Eye and Ear Infirmary. 12 mo., pp. 120. Henry C. Lea, Philadelphia. 1877.

This is a useful little volume to the student beginning to use the ophthalmoscope. It supplies the place of an instructor, and calls attention to many important and practical points which one not skilled in the examination of the eye would be likely to pass by carelessly. It is quite evident that the author understands the acquirements of a good ophthalmoscopist, and also the steps necessary to his best development.

BOOKS RECEIVED.

1. Myelitis of the Anterior Horns ; by E. C. Seguin, M. D. New York, G. P. Putnam's Sons, 1877.
2. The Practitioners' Hand-Book of Treatment ; by J. Milner Fothergill, M. D. Philadelphia, Henry C. Lea, 1877.
3. Atlas of Skin Diseases, Part II ; by Louis A. Duhring. Philadelphia, J. B. Lippencott & Co., 1877.
4. Transactions of the American Gynecological Association for 1876. Boston, H. O. Houghton & Co., 1877.
5. How to Use the Ophthalmoscope ; by Edgar A. Browne. Philadelphia, Henry C. Lea, 1877.
6. The Medical Register and Directory of the United States, 2d Edition ; by S. W. Butler, M. D. Philadelphia, D. G. Brinton, 1877.

Pamphlets have been received from Drs. D. Hayes Agnew, J. Marion Sims, T. Gaillard Thomas, C. R. Agnew, Henry D. Noyes, Samuel W. Gross, Edward W. Jenks, Emil Noeggerath, Edward R. Squibb, Emil Gruening, and Henry B. Sands.

The following exchanges have come to hand :—

La France Médicale.

Le Progrès Medical.

The New Orleans Medical & Surgical Journal.

Revista Medico-Quirurgica.

The Medical Record.

The Medical and Surgical Reporter.

The Medical Press and Circular.

The Doctor.

New York Medical Journal.

The American Journal of Obstetrics and Diseases of Women and Children.

The American Journal of the Medical Sciences.

The Chicago Medical Journal & Examiner.

The Boston Medical and Surgical Journal.

St. Louis Clinical Record.

Nashville Journal of Medicine and Surgery.

Detroit Medical Journal.

Proceedings of the Medical Society of the County of Kings.

The Ohio Medical & Surgical Journal.

Atlanta Medical & Surgical Journal.
The Louisville Medical News.
The Monthly Abstract of Medical Science.
Archives of Dermatology.
The Medical News and Library.
The Canadian Journal of Medical Science.
The American Practitioner.
Virginia Medical Monthly.
The Western Lancet.
The Hospital Gazette.
Deutsche Medicinische Wochenschrift.
Cronica Med-Quirurgica de la Habana.
Buffalo Medical & Surgical Journal.
The Ohio Medical Recorder.
The Practitioner.
Philadelphia Medical Times.
A Series of American Clinical Lectures.
Maryland Medical Journal.
The Homoepathic Times.
Transactions of the American Medical Association.
Transactions of the Philadelphia College of Physicians.
Transactions of the New York Academy of Medicine.

ARCHIVES OF CLINICAL SURGERY.

VOL. II, No. 4.

JULY, 1877.

Whole No., 13.

ORIGINAL PAPERS.

SURGICAL CASES.

BY

DAVID W. CHEEVER, M. D., OF BOSTON,

Professor of Clinical Surgery in Harvard University; Surgeon to the City Hospital.

During my winter term of hospital service, recently closed, there came under my care 81 operative cases. I propose to give in detail the more interesting points of some of these operations.

FOUR CASES OF AMPUTATION OF THIGH.

CASE I.—A boy of seven years of age got his leg caught between the spokes of a wagon-wheel, while in motion. There resulted a laceration of the ham, extending completely across the back of the knee-joint and up the outside of the thigh, six inches.

The femur was separated at the lower epiphysis, and the shaft, denuded of tissues for six inches, protruded through the wound. The knee-joint was opened.

The amount of shock was moderate. Immediate amputation was urged, but strenuously resisted by the mother. The bone was therefore slipped back into place, and the boy put to bed in a long fracture box. At the end of 36 hours, the parents begged for an amputation. Traumatic fever having set in, it was evident the golden moment was past and amputation was refused. During the next two weeks the patient sank into a feeble, typhoidal delirium, with foul suppuration and a large secondary abscess in the leg. During the third week he ceased to sink and barely held his own. Abscesses were evacuated and cleansed, and he took stimulants largely, and opium.

At the end of three weeks, the thigh was amputated at the upper third,

by skin flaps. Hemorrhage was controlled by the rubber strap, and although very feeble, he went through the operation.

Recovery took place in due time, although delayed by one attack of secondary hemorrhage.

CASE II.—A young man of 22 years, fell in the street, upon an ankylosed and bent knee-joint. This condition was due to old articular disease, with shortening, contraction and wasting of the limb. The fall was sufficiently violent to produce a lacerated, compound fracture of the joint. The ankylosed knee was widely torn open, as if cut open for an excision. The withered and useless condition of the limb made the patient acquiesce readily to an amputation. The thigh was amputated in the lower third, by skin flaps. Recovery was perfect. In three weeks he was on crutches.

CASE III.—A woman of 30 years had an amputation for disease of the tibia. Her condition was feeble and precarious, as she had had several chills during the preceding fortnight. Amputation of the thigh in the lower third was done, by skin flaps. She went through the operation safely, and recovered.

In all the above cases, extension by plaster, pulley and weight of 3 to 5 pounds, was applied to the stump. This treatment relieves spasmodic twitching, and prevents retraction of the flaps. The stumps were done up dry: stitches taken out early: and the wound then dressed with a wash of laudanum and liq. sodæ chlorinate.

CASE IV.—A healthy and temperate young man fell some 50 feet through an elevator shaft. He sustained a well marked scalp wound; no apparent fracture of the skull, a compound dislocation of the right knee, with laceration of skin, and a simple fracture of the right femur in its middle. Also a compound fracture of the left leg, with a minute opening. Notwithstanding these terrific injuries he was calm, conscious, and had a fair pulse of 84. No vomiting. After waiting two hours, it was thought best to amputate the right thigh, as it was past saving, and was steadily oozing with a venous hemorrhage, though small in amount. The left leg was put in splints. The patient stimulated—the rubber tubing twisted round the groin.

The right thigh was amputated in the upper third, just above the fracture, by transfixion. Continuous hemorrhage came on in the stump, which resisted all methods applied for three hours to check it; the patient was stimulated with subcutaneous injections of brandy, and enemata of brandy and ammonia. He never roused from his ether, and died of exhaustion in five and a half hours.

AMPUTATION AT THE SHOULDER-JOINT.

A little girl of seven years, while running home from school, tripped and fell on a railroad crossing, and had her left arm crushed by a locomotive. I saw her two hours afterwards. The arm was torn off below the elbow. There was no hemorrhage. The humerus was comminuted high up to the surgical neck. The arm was enclosed in a wrap of dissected skin. The median and musculo-spinal nerves remained intact. The vessels were gone. The child's condition seemed excellent—pulse moderate—temperature even—no vomiting. Ether having been given I made as large a deltoid flap as the tissues allowed; opened the joint; disarticulated the head of the humerus, by rotating the stump with the lion forceps, and cut square out below. At the same moment my assistant compressed the axillary flap. Extremely little blood was lost. The skin covered the socket easily and well. There appeared to be no additional shock, yet it was thought prudent to give an enema of brandy and water.

During the evening diarrhoea, colic and delirium came on. The next morning, she rallied. In the afternoon she sank into collapse and died, just 24 hours after the operation.

In this, as in case 4 of primary amputation of the thigh upper third, the first appearances as to the amount of shock were deceptive. Both appeared well enough for operation. Both sank into a state of prolonged shock, and expired.

FOUR CASES OF AMPUTATION OF THE BREAST.

CASE I.—Was of chronic mammary tumor in a young, married woman, who, when first seen, was in a condition of great anæmia. Six months of tonic treatment, brought her up to an operable condition. The tumor increasing, it was then removed.

CASE II.—Was of scirrhus cancer in a woman of 45, and had been of eighteen months' growth. There was no implication of the glands.

In both these cases torsion of the arteries was practiced. In both of them intermediate hemorrhage came on after about 18 hours. This retarded the healing of the wounds.

CASE III.—Was of soft cancer, of rapid growth, succulent and vascular. It occurred during lactation, in a feeble woman. At seven months the child was weaned, and the milk dissipated, because the disease was evident. Two weeks later she was operated on, and the tumor easily removed. A mass of infiltrated glands in the axilla was found, and dissected out with much labor and trouble. In this case, the disease recurred as a soft, fungous mass, in the wound at the breast, before the lat-

ter had healed,—although the tumor and breast were entirely and cleanly dissected off from the pectoral muscle.

CASE IV.—Was of cystic-sarcoma of two years growth. It occurred in a maiden lady of 42 years, and was large, and latterly rapid in its cystic enlargement. There was no discharge from the nipple. The whole mass was readily removed.

In the two latter cases the ligature of vessels was used, and no hemorrhage followed. Torsion appears to be poorly adapted to the short perforating arteries of the thorax.

In all four cases, the entire breast was removed. All suppurred; all recovered. The average of convalescence was about six weeks.

TWO CASES OF AMPUTATION OF THE PENIS.

CASE I.—Was of epithelial cancer, in an old man, involving the prepuce, glans, and a portion of the cavernous bodies. At the time of amputation the arteries did not bleed well, and it was feared there might be general atheroma. Within three hours, after the patient got warm in bed, hemorrhage came on, and was profuse. It checked itself by coagulation under the flaps, but reduced the patient seriously. He, however, made a good recovery.

CASE II.—Was of epithelial cancer, identical with the first case. The patient was old. He recovered in 3 weeks, without a bad symptom. There was no enlargement of the glands on the dorsum of the penis, or in the groins in either case. In the first patient a recurrent mass showed itself in the pelvis within three months after the amputation.

The operation in these cases was done as follows: The patient was etherized. A piece of tape was tied tightly around the root of the penis. The skin was moderately retracted by the left hand. With a narrow, straight bistoury the penis was transfixed between the cavernous and spongy bodies. The knife then cut downwards, parallel to the penis, for one third of an inch, and then cut outwards and downwards, across the spongy body. Re-entering the knife at the first incision, it was then made to cut across the cavernous bodies directly upwards, the tape preventing bleeding. We now had a stump where the spongy portion, containing the urethra, projected one third of an inch longer than the upper half of the stump, made up of the cavernous portion. The object of this is to leave the urethra longer than the stump.

The urethra was now slit in four directions with scissors, so as to make four flaps. A suture was passed through each flap, and thence through the skin, but not drawn up. The tape being taken off, bleeding vessels

were secured by ligature, and many oozing points of the cavernous bodies, were also tied.

The flaps of urethral mucous membrane and the skin were now drawn together and tied. This covered in the whole stump with skin, and as the healing contracted the parts, drew open the urethra like a tunnel, and prevented any contraction of the urethral orifice, which is the greatest trouble after the old method of amputating the penis.

THREE CASES OF EXCISION OF THE HIP.

CASE I.—A little girl of 10 years. Hip disease for four years. Has been in the hospital three months. Two months ago she was etherized and an abscess over the rectus muscle laid open. Every effort was made to ascertain whether this abscess communicated with the joint, but without success. After two months of extension by weight and pulley, it was evident that she was retrogading, and she was again etherized. Grating in the joint was now found, and excision was performed. The joint having been opened, the head of the femur was found much eroded, but the acetabulum only a little involved. The abscess communicated with the joint. The head of the bone was removed. Extension by pulley was re-applied. The child is doing well.

CASE II.—A boy of 6 years. Hip disease for 3 years. Shortening, inversion, dislocation, abscess. No improvement under extension. Excision found the femur and the acetabulum both diseased. The head of the femur was excised. The child has not been affected much by the operation, and still has on the extension by weight.

CASE III.—A boy of five years, was brought to the hospital from the country. He has had hip disease 3 years. There is dislocation, shortening, inversion, repeated abscesses, and a sinus at the gluteo-femoral fold, behind the trochanter, large enough to admit a goose-quill, and going straight into the joint. Dead bone was readily felt at the bottom of this sinus. There is very moderate suppuration. General health exceptionally good. Operation is indicated to remove the dead bone, the disease having gone through most of its natural stages.

At the operation, on opening the joint, it was found difficult to extract the head, as it could not be rotated out by the leverage of the shaft. The reason was plain when farther dissection revealed the head of the femur totally separated from the shaft, and lying loose, like a foreign body, in an eroded and perforated acetabulum. The head was lifted out, and fragments scraped. There appeared to be but little shock, and moderate hemorrhage. This boy, however, at the end of 48 hours sank into a state of "prostration with excitement", and thence into low deliri-

um, with a foul, sloughing wound. At the end of a week tetanus supervened, and terminated his life in two days.

I am disposed to attribute his death to the fact that he was too fresh from country life and too healthy, when operated on; for I have invariably found that the feeble invalid, habituated to confinement and to prolonged suppuration, goes through an excision with but little shock, and without danger.

The mode of excision of the hip I practice is to make a V shaped flap of skin, large and broad at the base, and with the point of the flap over the trochanter major. This flap being raised, the attachments to the base of the trochanter and neck, and the capsule are divided by cutting in an arc, convexity uppermost, over and above the trochanter. Then the head is rotated out, usually an easy task, since partial dislocation on to the lip of the acetabulum is generally found,—and the diseased part cut off with the chain saw. Where practicable, the trochanter is left in. The acetabulum is then explored with the finger, and loose fragments picked out. No scraping is done. The shaft then is replaced, and the limb extended by weight. In order to assure good drainage the flap of skin is fastened back to the crest of the ilium, and not allowed to fall over the wound. The shock is usually very slight, and most cases do well. When death has occurred it has almost always followed months afterwards, and then as the result of organic degeneration, such as tubercular meningitis, phthisis, or tabes mesenterica. The frequent association of these affections with hip complaint, in the same individual, is to my mind strong proof of the constitutional, as distinguished from the traumatic cause of *morbus coxarius*.

LIGATION OF THE PRIMITIVE CAROTID.

A man of about 30 years of age was brought into the hospital with a large, suppurating sore in the right side of the neck, behind and beneath the sterno-mastoid muscle. There were three cavities, crossed by bridles, and looking not unlike the indolent crater of a chronic bubo. In one of the openings was a mass of sheet-lint, and it was stated that, for a week past, repeated bleedings had taken place from this cavity. The openings extended from the level of the top of the thyroid cartilage well down into the subclavian triangle. The lint was packed into the middle cavity, and was excessively offensive and discolored. The patient stated that being a laboring man, his health had been failing for some months. Also that the posterior chain of cervical glands had been enlarged and tender, and finally suppurated and opened spontaneously. That, annoyed by the long and exhaustive suppuration, too sick

to work, but too poor to lay up, he consulted a physician, who told him that he could treat him while he continued to work, if he came to his office evenings. He did so, and caustic was repeatedly applied. (according to the patient's statement.) A week previous a large bleeding suddenly occurred, and was followed by daily smaller ones. Becoming alarmed, the wounds were packed with lint three days previously, and the patient sought the hospital.

It was evident that the foul dressings must be removed at all hazards. With caution piece after piece of rotten lint was drawn out, from a cavity which would hold a hen's egg. A small piece of clean lint was then gently inserted. I had not left the patient for ten minutes when I was recalled, as bleeding had come on. It was profuse, and of a bright cranberry color. The ward-master had arrested it before I got there, by crowding the corner of the bed sheet into the cavity, and holding on firmly. The patient was faint, pale, sweating. Measures were now adopted to hold on to the hemorrhage temporarily, and the patient stimulated, and given time to rally.

At the end of two hours I decided to operate and try to secure the hemorrhage. In the sloughing condition of the wound or cavity, owing to its size and irregularity, and also on account of the violent rush of hemorrhage, which appeared to be arterial, it was judged impracticable to secure the vessel in the suppurating cavity where it had burst.

The only course open to us seemed to be to secure the main arterial trunk between the heart and the bleeding cavity. It is to be borne in mind that the contour of the neck was changed by swelling, and deformed by sponges and lint packed in under the sterno-mastoid muscle, in three suppurating cavities.

The patient was stimulated, and then etherized. He was very feeble. An incision was made in front of and parallel to the sterno-mastoid, from the level of the cricoid cartilage, down to the sterno-clavicular articulation. Dissection was difficult owing to capillary bleeding, which was copious, endless, and of a bright, peculiar cranberry color. All the parts were reddened, filled with serosity and thickened. With much labor and loss of time, the patient meanwhile having been occasionally stimulated with enemata, the primitive carotid, close down to the clavicle, was reached and tied.

Pulsation cease in the temporal artery. It was evident that the arterial circulation was arrested, below the bleeding point.

The packing was now quietly removed from the cavities, and on taking out the last sponge, a clot, as large as a peccan nut followed it. In-

stantly the neck was flooded with a rush of bright, cranberry colored blood. The pulse fell off, and the breathing became gasping. Sponges and perchloride of iron were crowded into the cavity, and the bleeding arrested.

As soon as safe to do so, the patient was put to bed. The neck was compressed. Warmth, food and stimulation were used. Under these he rallied. Foul suppuration and sloughing came on ; and he died of exhaustion, without any more bleeding, at the end of 48 hours. An examination of the parts revealed an oval, ulcerated opening, which would admit the tip of the little finger, into the *internal jugular vein*. The artery was intact.

Whence and why the bright color of the blood remains a mystery. Hanging out of the opening in the vein was a long clot which extended an inch into the vessels, and was of the same cranberry color.

HERNIA STRANGULATED IN THE SAC—HERNIOTOMY.

The patient, a vigorous young man, was brought to the hospital in an exhausted condition, having suffered from incarceration for two days, and from strangulation nearly twenty-four hours. He had had a scrotal hernia for two years, and had never worn a truss. It usually reduced itself at night. Now his expression was anxious ; pulse quick and feeble ; tongue brown ; abdomen tender near the groin, and the capillary circulation very sluggish, with a cool skin. This condition of the capillaries has always proved, in my experience, a pretty sure indication of strangulated intestine, or of advanced peritonitis. A firm, red scrotal tumor extended up into the inguinal canal. The breath and skin of the patient were very offensive, and distinctly fecal. He was vomiting a thick, pulaceous mass, with an intestinal odor. There was no fecal vomiting, and I never saw any in any case.

The patient having been etherized came near dying of syncope, but was revived by artificial respiration, and stimulants. The operation was done without ether. On slitting open the scrotal tumor there was a gush of reddish serum, but the sac was empty of intestine, or omentum. Extending the incision upwards, the gut was found protruding through the *internal* ring, and of a dark, maroon color. The internal ring was now cut open, but yet the hernia was not released. On farther search the stricture was found in the neck of the sac inside the belly, and downwards towards the pelvic cavity. This having been divided, the gut was easily drawn down until a healthy loop appeared.

The whole intestine was now returned into the abdominal cavity, and the wound closed with sutures, except the lower angle. The bowels

moved three hours after the operation, and vomiting ceased. Diarrhœa came on, but subsided. The wound suppurated, and healed; and the patient was on his feet in one month.

Strangulation in the sac is rare; but several instances are figured in Sir Astley Cooper's Folio on Hernia. It might easily be overlooked, and continue a fatal strangulation, where the hernia is reduced, *en masse*, by injudicious taxis.

INFLAMMATION OF THE TIBIA, AND COAGULATION IN THE DEEP
VEINS OF THE LEG.

The patient was rather a feeble young woman of twenty-five. Two years ago she fell, with moderate force, on the right shin. Effusion and pain followed, the latter persisting, and being accompanied with spasmodic contraction of the knee, she entered the hospital in the summer of 1876. She was etherized, and the limb coming down into place, was thought to be a case of hysterical knee. She was, however, kept in bed awhile with extension, and then discharged. Two months later she came to my office, complaining of lameness and constant pain, in the shin. The tibia was tender on pressure, and on tapping with the finger tip gave a sensation like touching a carious tooth. There were no nodes or discolorations. The ankle and foot were oedematous, and the foot cold. She was advised to re-enter the hospital; and did so under my care.

A great variety of external applications, depletive, vesicant and anodyne were tried on the leg: together with internal medications by rest, tonics, stimulants, good diet, a course of bichloride of mercury, and a course of iodide of potash. She grew worse steadily. Pain increased. The calf was oedematous, tense and cold. She had chills at irregular intervals. Attempts were made to find pus at intervals, (1) by free incisions; (2) by aspirating the oedematous tissues; (3) by trephining into the medullary cavity of the shaft of the tibia, but all without the slightest effect. The patient failed steadily. She grew very anaemic. She had repeated chills; some cough; frequent vomiting; incessant and wearing pain. The calf, ankle and foot were very tightly swollen and cold. The tibia exquisitely tender. The limb above the knee-joint was absolutely healthy in appearance.

Under these circumstances, amputation was advised, and gladly assented to. The leg was amputated above the knee by skin flaps. Relief from pain followed in 24 hours. Healthy suppuration came on, and although retarded by recurrent chills and a persistence of nausea and exhaustion, the patient finally made a good recovery.

An examination of the leg revealed no pus, anywhere. The tibia was inflamed, reddened, softened in portions of the cancellous tissue, and eburnated in the shell of the shaft. The periosteum was much thickened. There was no caries. The deep veins of the leg were plugged with coagula up to the popliteal, and in that vessel. The tissues of the calf and foot were infiltrated with serum and lymph. There was no change in the arteries. All the diseased conditions stopped abruptly at the popliteal space. From the time of the first symptom to the amputation, was eighteen months. We have then, show osteitis, periphlebitis, and thrombosis of the deep veins, to explain the pain and swelling. Slight embolisms probably account for the chills.

Which of all these diseased processes was the first in time, and the cause of the others?

TRACHEOTOMY AND REMOVAL OF THE UPPER JAW.

Mrs. —. 60 years of age. About four years ago noticed an enlargement beneath the right eye. This grew slowly and encroached on the nose and filled the antrum. Three years and a half since I removed all the superior maxillary bone except the orbital plate. The parts healed kindly, and she remained comfortable for about a year, or more. The disease then recurred and showed itself in the original site, and especially distended the right nostril, producing great deformity, and extending back into the pharynx. It was advised to remove it again, as her strength was good.

Ether was given, and then, in the horizontal position, the trachea was opened and a large tracheal tube inserted. The rings of the trachea were somewhat ossified. As soon as breathing was tranquilly restored through the tube, the ether sponge was applied there. A good sized sponge, attached to a string, was now crowded back in the throat, behind and below the soft palate, completely occluding the fauces.

The face and cheek were now dissected up by Fergusson's incision, from the inner angle of the eye, around the ala of the nose, and through the myrtiform fossa. As soon as the cheek and nose were separated from each other and reflected, the tumor sprang out into view, in numerous, soft, irregular lobules. These were removed principally with a periosteum scraper, as they were soft, and could be peeled off from the bones. The tumor filled the antrum, nasal cavity (one side), one half the pharynx, ethmoid cells, back to the sphenoid, and outwards into the sphenomaxillary fossa. Bleeding was checked, partly by ligature, but chiefly by styptics and ice. Nitric acid was applied to the base of the growth. The bleeding was arrested; the sponge taken out of the throat, and no

blood had run down into the stomach, or air-passages. The operation was well born, and the patient required no stimulation. The trachea tube was left in 12 hours, and then withdrawn. The tracheal cut was then left open, and breathing was tranquil.

With the exception of a slight attack of facial erysipelas, she did well up to the 9th day, when a copious hemorrhage occurred from the mouth and nose, from which she could not rally, and she died from syncope.

Tracheotomy preliminary to operations on the face, jaws and mouth, I have performed for some years, with great benefit. It enables the surgeon to operate at his ease, as regards the dangers of suffocation from hemorrhage ; and also diminishes the shock to the patient, since the operation can be done in the recumbent position. Within a few years we have known of two deaths during operations on the jaws, apparently from shock, or syncope.

A year since, while operating for the fourth time on a soft, recurrent tumor of the upper jaw, suffocation came on from blood getting into the trachea, and the patient was only saved by a rapid tracheotomy.

**PROLONGATION OF LIFE AFTER A FRIGHTFUL LACERATION OF THE
FACE AND SKULL.**

The patient, about 50 years of age, attempted suicide by firing a gun loaded with bird shot, placing the muzzle under his chin.

The direction of the gun was not sufficiently oblique to fire through the head, as he doubtless intended. Instead of this the charge passed through the jaws and up through the face, emerging at the frontal sinuses.

The gunshot wound carried away the whole body of the lower jaw ; split the tongue ; blew away both upper jaws, as far back as the second molar teeth ; all the bones of the nose ; the ethmoid, and the outer table of the frontal bone, opening the frontal sinuses.

The charge passed between the eyes, leaving them only bruised and blackened. The frontal sinus, ethmoid cells, all the nasal passages, pharynx, and mouth down to the hyoid bone were thus thrown into one huge, gaping, lacerated, open wound. Sight and consciousness were perfect : and when I first saw the patient, he was walking about the room, dripping with blood and saliva, and attempting to articulate.

Traumatic delirium soon came on, and it was, for some hours, impossible to restrain the patient. After this he became calm. An attempt was made to inject a mild solution of ferric alum about the wound, and subsequently to wash it out with a disinfectant, but without doing any good, as it only provoked resistance and suffocation.

Attention was then wholly directed to keeping the patient quiet and

nourished by enemata of laudanum, beef-tea, milk or brandy. On the second day he regained some power of swallowing, and took milk, by passing it well back into the pharynx. On the third day his temperature was 101° , and his pulse 68 to 80; he took his milk and brandy well.

The face and eyelids are swollen, of a deep color and suppurating. Fourth day; œdema of scalp, great swelling of lids and ecchymosis of conjunctivæ, but sight good.

Can now articulate pretty well. Asked to look out of window, got up, walked to window, pushed up his eyelids and looked out.

Fourth day.—Pulse 100 to 132; temperature 102 to $103\frac{1}{2}$. Very offensive odor from wound—retains consciousness—can't speak, see, and swallow.

Fifth day.—Conjunctivæ threatening to strangulate corneæ, they were punctured. Pulse 120 to 140; temperature 104° . Swallowed seven quarts of milk to-day.

Sixth day.—More comfortable, quiet. Pulse 100 to 108; temperature 102 to 103° . Takes 3 xii of brandy a day.

Seventh day.—Wounds sloughing. Purulent ophthalmia. Much exhausted.

Eighth day.—Sinking; expired quietly in the afternoon.

The autopsy revealed a fracture of the cribriform plate of the ethmoid bone, and also the orbital plate of the frontal bone. The right anterior lobe of the brain, just above the fracture, was lacerated to the extent of an inch each way: the lacerated surface was sloughing and purulent. Above this, in the cerebral substance was a small clot. The left side of the brain was lacerated, to a slighter extent, over the ethmoid bone. There was no general meningitis, and the rest of the brain was normal; so were the viscera.

That life could be prolonged over a week, with retention of the power of seeing, thinking, swallowing and articulating, after such a mutilation, seems surprising.

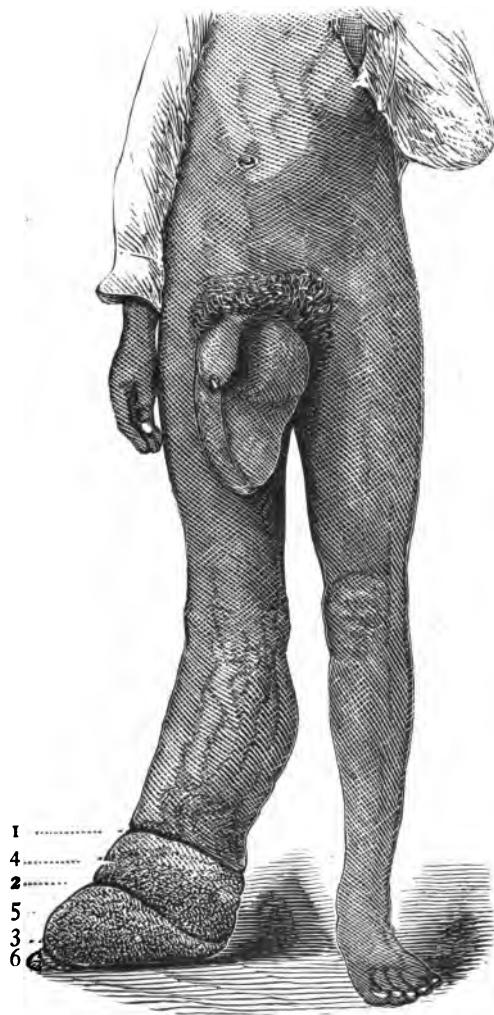
A NEW OPERATIVE PROCEDURE FOR ELEPHANTIASIS ARABUM AFFECTING THE LOWER EXTREMITIES.

BY

M. CORCHADO, M. D., OF PONCE, PORTO RICO.

Lorenzo Tiben, a mulatto, native of Porto Rico, twenty-five years of age, of gigantic stature and lymphatic temperament; presents, besides a

hydrocele, a swelling of the right leg, the dimensions of which are: 58 centimetres in circumference at the calf, 54 at the malleoli, and 42 at the



instep. The numbers 1, 2 and 3 designate deep furrows where the skin, scarcely altered, preserved its normal and primitive relations with the subjacent tissues, and gives rise to as many strangulations, which limit

Nos. 4 and 5, tumefactions formed by the skin and cellular tissue, more hypertrophied at these intervals than elsewhere in the limb. The tumefaction (5) of the foot, resting on the toes, completely covers them all, except the big one, the extremity of which can be seen at 6 ulcerated and discharging offensive matter. The bottom and sides of the furrows look rosy and are covered with a sticky transudation of nauseating odor. The skin, rough to the touch, has a dirty dark hue: the impress of the fingers is readily stamped thereon; and on applying Esmarch's bandage, its volume is uniformly reduced.

The patient's history is the following:—five years ago he noticed for the first time that his leg was swelling, and that the glands of the groin were also affected. Simultaneously he had fever, which did not leave him for eight days. The fever over, the inflammation began to subside. Since then he has had repeated attacks of the same symptoms, noticing, however, that after each access his leg remained somewhat larger, until finally he was unable to walk or stand on account of its enormous weight. His health being otherwise excellent, he has hitherto sought no relief for his infirmity.

The diagnosis was evident. We then proceeded to investigate the causes. His mother and one of his sisters both are at present suffering from the same disease. Bad nourishment, continuous exposure to dampness, insufficient clothing and all sorts of privations have aided this hereditary diathesis.

In view of the inefficacy of all the means employed against elephantiasis of the extremities, including ligation of the large arterial trunks, Dr. Pasarell and I resolved to apply to the leg that method which we have often used for elephantiasis of the scrotum, associating to it Voillemier's recent modification in scrototomy. According to this expert surgeon the frequent failures in scrototomy and, above all, the frequency of gangrene as a result of this operation,* are owing to the abuse of dissection in order to obtain large flaps, capable of covering the organs exposed by the removal of the scrotal tumor. The thinness of the flaps deprives it of a sufficient supply of blood. And if this is a grave obstacle in ordinary autoplasties, it is a much graver one in elephantiasis, where not only the cellular tissue is affected, but also the skin throughout its thickness. Voillemier prefers therefore to expose the organs as little as possible, to give a strictly necessary extent to the flaps, and above all to leave them

* We have never seen in Porto Rico gangrene as a sequel of this operation, at least to any serious extent.

sufficiently thick even at the expense of the diseased skin and cellular tissue.

What happens, according to Voillemier? "That the elephantiasis, a morbid inflammation which comes on by successive onsets, and which rapidly engenders fibrous elements, suddenly suffers a modification, and is thwarted in its course by an acute inflammation as a result of the operation. Without attempting to explain this phenomenon, it is evident that the parts have changed their way of living, and that to the process of proliferation of fibrous tissues succeeds a new process of absorption." (*Elephantiasis du Fourreau de la Verge, et du Scrotum; par le Dr. Voillemier.*)

We shall omit all discussion on the theories of Voillemier, notwithstanding that they are entirely opposed to those which we have hitherto maintained. We must acknowledge that the new method has given him splendid results.

On the 24th of last March, Tiben was put under the influence of chloroform, and we began the operation by practicing a deep incision of the skin, at about two centimetres from, and parallel with the furrow at the foot, behind the metatarso-phalangeal articulation. From its extremities, which corresponded to the sides of the foot, we carried two more incisions, also deep, and parallel to each other, up to the corresponding malleoli. The flaps included by these three cuts having been dissected, we removed all the hypertrophied cellular tissue lying beneath, until we uncovered the extensor muscles, which we found pale and atrophied.

Deprived of this adipose cushion, from whose vesicles issued a large quantity of serum, and tearing the bridle which the furrow No. 2 formed throughout its length, the flaps of skin necessarily became redundant, for which reason we cut off a portion so as to be able to adapt the remainder exactly to the boundaries of the new surface. It only remained for us, before dressing the wound, to tie the mere arterioles that might have remained open, for we were sure of not having wounded any vessel of importance. For this purpose we removed the tubular coil of Es-march's apparatus, and, soon after, the traumatic field changed from pale to pink, then to red, and in a few seconds it became a regular fountain of blood. It is the case that in elephantiasis, the nutritive exuberance requires the formation of new vessels which shall keep up at the expense of the others the fertilizing current. We have been surprised to see with what rapidity the emaciated body regains its losses, soon after the operation of oscheotomy, as if the removal of the scrotal tumor was the dike which re-established the proportionate sharing of nutrition to which each organ is entitled.

It was easy to ligate or twist the spurting vessels ; but not those that, retracting, baffled the search of the eye and of the forceps, and continued to bleed profusely. The patient having been for more than an hour under the influence of chloroform, and having lost and still loosing much blood, the imminent danger made it necessary to re-apply Esmarch's bandage around the thigh, and amputate it at its lower third, when, as a strange contrast, we had to ligate only the femoral.

What did we purpose by removing only a part of the diseased cellular tissue, when all that remained was in a similar state ? *First.* To give a broad vent by the wound to the serosity contained in the meshes of the cellular tissue. *Secondly.* "To modify and thwart the progress of a morbid inflammation by inducing another inflammation, acute, and of a new character, resulting from the operation."

Had the foot been benefitted by this, we would have performed on the leg a similar operation.

Is this untoward result sufficient to make us desist in future from like attempts ? No, as far as I am concerned : but on another occasion, I shall restrict myself to extirpating long and narrow bands of cellular tissue, and not at one, but at several sittings. Thus limiting the action of the knife, the hemorrhage will be less, and more easy to control.

Carrying out the extirpation at several sessions, the resulting inflammations will be several, and hence more apt to modify and thwart the progress of the elephantiasis arabum.

A CASE OF TUBERCULAR DROPSY OF THE ABDOMEN,
SIMULATING OVARIAN TUMOR.

BY

THEODORE A. McGRAW, M. D.

Professor of Surgery in Detroit Medical College.

A lady living near Brighton, Mich., presented herself about the end of February, 1875, at my office, with a letter of introduction from her attending physician, Dr. McHench. She had had a dropsical enlargement of the abdomen for about a year, and had been once tapped. The fluid which escaped was of a straw color and thin. A well known gynecologist, who examined it, and the patient as well, pronounced it to be from an ovarian tumor. The patient, when I examined her, was as large as a woman in the ninth month of pregnancy. Her abdomen was symmetrically extended, fluctuated distinctly, and was everywhere dull on per-

cussion, except in the epigastric and two lumbar regions. The region of dulness did not vary on change of posture. I fancied that I could detect, though indistinctly, the pulsation of the abdominal aorta, through the abdominal walls. The uterus was freely movable, and a sound could be passed two and three quarter inches into its cavity. No tumor nor swelling of any kind could be detected by vaginal examination. The patient was otherwise in perfect health, had menstruated regularly, had never been pregnant, though several years married, had never suffered from cough nor other evidences of tuberculosis, and had never had any peritonitis, excepting that of a very circumscribed nature, which had immediately followed the tapping. There was present no abdominal tenderness. The only symptom which made me suspicious lest the enlargement might be something else than ovarian, was the history which she gave of the tumor at its beginning, for she asserted positively that it was first noticed near the navel, instead of in either groin.

On March 16th, I met Dr. McHench in consultation, and made an exploratory operation. The linea alba was divided for a length of two inches, and the peritoneum to the extent of one inch. A large quantity of straw colored fluid gushed out, flooding every thing and filling a medium sized wash-tub. There was no tumor whatever, but the intestines lay matted together on the back-bone. The whole surface of the peritoneum, parietal as well as visceral, was rough as a nutmeg grater and covered with innumerable hard small knots, large as a pin's head, which shone white through the somewhat reddened serous membrane in which they lay imbedded. In no place could I find a square inch free from their presence.

The wound was closed with silver wire and the patient quickly recovered. Soon afterwards she became affected by a slight cough, and Dr. McHench became alarmed lest it might indicate the development of pulmonary tubercle. It disappeared however under the use of cod liver oil and similar tonics.

A small re-accumulation of serum took place, but underwent absorption after the application of a fly blister to the abdominal walls.

For two years the patient remained perfectly well, but very recently I received a letter from Dr. McHench, saying, that there seemed to be a slight return of abdominal dropsy.

I can find on record but one other similar case. Mr. Spencer Wells describes one in his work on Diseases of the Ovaries, with almost the same history. His patient, also, recovered completely after an explora-

tory operation, and was afterwards married. The ordinary history of tubercular peritonitis would seem to be very different.

Atlee relates three cases:—Every one was marked by paroxysms of pain and local soreness, and by great general debility and emaciation. All died—one in ten weeks, another in fourteen months and the third in three months after the appearance of the first symptoms. In my own case, there had been no local symptoms whatever, except such as might readily have been caused by a unilocular cyst of the ovary,—pain, soreness, debility and emaciation having all been wanting in the history of the patient. In my case and in that of Mr. Wells, the operation was apparently curative, as the dropsy did not recur and the general health was afterwards good. Mr. Wells is inclined to attribute the cure to the acute peritonitis excited by the cut and the exposure to the air, but as no peritonitis resulted in my own case it would seem more probable that the happy result was caused by the complete evacuation of the fluid. This would not be a strange experience in surgery, for in bursal and other enlargements, due to the abnormal collection of fluids in cavities, the free discharge of the contained matter seems to be necessary to recovery. The very presence of an abnormal fluid is irritating, and even a slight unnatural distention of a tissue is apt to be resented.

It might not, on these grounds, be unreasonable to hope that the incision of the abdominal walls might prove of advantage in other forms of intractable dropsies, such as those which sometimes appear in women at change of life.

It is utterly impossible to thoroughly empty the abdominal cavity with an ordinary trocar. It may be done by a small cut, through its walls, and thus the peritoneum may be relieved of the irritation due to the presence of what is really a foreign body. It is very possible that a disease which in two cases at least has yielded to exploratory incisions, might in others be cured by tapping.

The question would then arise, whether cases of apparent cure of ovarian tumors by tapping may not in reality have been cases of tubercular dropsy. Of the cases reported by Wells where simple tapping has cured ovarian disease, some were probably uterine cysts or cysts of the broad ligament. Others described as unilocular cysts might easily have been cases of dropsy from tubercular deposit. The diagnosis of such dropsies from ovarian tumors must in many cases be utterly impossible without the aid of an exploratory incision. Even the character of the contents would not absolutely decide the question, for I removed an ovarian tumor last summer from a little girl twelve years of age, in which there were no

so called ovarian corpuscles whatever. In one of Mr. Well's cases the fluid taken from the patient is described as "of a greenish hue, limpid and showing nothing under the microscope", in fact just such a fluid as might have been anticipated, had the diagnosis been that of tubercular trouble.

IODIDE OF POTASSIUM IN IRREDUCIBLE HERNIA.

BY

R. O. COWLING, A. M., M. D.

Professor of Surgical Pathology and Operative Surgery in the University of Louisville.

In June 1876 I went into an interior county of Kentucky to operate for strangulated hernia. It turned out when I got to my destination that no operation was called for, the trouble in the hernia having passed away ; but the case proved a curious one. Its history was this : The patient, Mrs. M.—, 37 years old, of robust build, the wife of a farmer, married fifteen years, with one child aged 12, had a femoral hernia on the right side of five years standing. It commenced in the usual way, remaining a tumor of insignificant size for a couple of years, when it escaped above Poupart's ligament and continually enlarged, until when I saw it it occupied an area of about 3 by 4 inches. Such were the measurements I took for a truss to encompass it. The impression I gathered from feeling the tumor was that it contained both omentum and intestine. Mrs. M— had passed through the troubles incident to an incarcerated hernia, and they had been more than usually severe. She had been making salad for a party, tasted it continually and was attacked with colicky pains in the region of the tumor, which increased in severity and lasted five days. There was constipation and vomiting, but no fever and little tenderness in the tumor. Her physicians, Drs. Wells and McCluskey, had given her purgative doses of calomel and enemata without effect. Afterwards morphine was given and secured ease and sleep for awhile. On the fifth day they made taxis under chloroform, failing to reduce the tumor ; but a full dose of castor oil which was given after the taxis produced copious evacuations. When I saw the patient she was suffering chiefly from hypercatharsis. This soon yielded, however, to the paregoric which had been given, and all went well. But here was the trouble,—the patient was continually subject to these attacks of colic, and they were increasing always in severity. For a long time they were considered the ordinary results of indigestion, which had been speedily

relieved, and not until her last attack had she called the attention of her family physician to the presence of the tumor in her groin. It was plain that incarceration was sometime or other going to end in strangulation, and with it the danger of herniotomy. I was therefore exercised to relieve her, if possible, of future trouble, and the hint of Erichsen in regard to iodide of potassium in irreducible hernia occurred to me. I recommended that she should have a faithful trial of the remedy, and that in the meantime the tumor should receive proper support. An attempt made by an instrument maker to fit a truss having failed, I ordered in its stead an abdominal supporter with a concave pad to go over the tumor. It gave admirable support, far beyond that of any truss I ever saw fitted. The patient was ordered ten grains of the iodide of potassium three times a day, with directions to keep it up as long as it seemed to agree with her. The benefit of the treatment was early and marked.

A year has gone by, and the patient has suffered no more with pains, and the tumor has steadily diminished. I wrote to Dr. Wells a few weeks since, begging him to send me a history of the case after I had left it, and especially to note the present condition of the hernia. I make the following extracts from his letter in reply:—

“She took the iodide about five months in 10 grain doses three times a day, which agreed well with her. The tumor seemed to diminish from the time of the last attack slowly, for four or five months, since which time it remains about the same. It is now quite hard, about $1\frac{1}{2}$ inches in its long diameter, and 1 inch in its short diameter. Pointing super-
orly. She has had no return of the attacks since you saw her. * * * * In regard to the iodide treatment in this case I am unable to say whether it has had much to do with the reduction of the tumor or not; one thing we do know, either that or the compress and supporter has made great improvement in the case.”

LOUISVILLE, Ky.

PROGRESS OF SURGERY.

SEMI-ANNUAL REPORT IN ORTHOPEDIC SURGERY.

BY

NEWTON M. SHAFFER, M. D.,

Surgeon to the N. Y. Orthopedic Dispensary and Hospital; Orthopedic

Surgeon to St. Luke's Hospital.

Statistics of Suppurative Coxalgia treated in the Berck Hospital.—(Statistique des Coxalgies Suppurées traités à l'Hôpital de Berck). By M. Cazin. (*Bull. et Mem. de la Soc. de Chir. Tome. II. Ao. 5. 1876.*)

M. Cazin states that the "expectant treatment" alone is pursued at the Berck Hospital and that "resection of the hip-joint, so vaunted for several years and already a little questioned by its foremost partizans" is an operation which should be performed in very exceptional cases only. The treatment pursued at the hospital is thus summarized: without having recourse to any important surgical operation the joint is placed under better conditions for local improvement (by immobilization or extension apparatus) while the general condition is sustained by constitutional and hygienic measures.

Up to March 9th 1876, 212 cases of coxitis were treated, of which 80 were suppurative. Of these 80 cases, 38 affected the left, and 33 the right side—8 were unspecified and 1 existed in both joints. The mean duration of treatment was 555 days. The average age was 9.36 years.

The results obtained in these 80 cases (the only ones reported) were as follows:

Cured,	44.
Relieved,	6.
"Not cured",	20.
Died,	10.

Of the 44 cured there were only 2 that suffered a relapse.

Investigations Regarding the Extensibility of the Larger Joints of the Extremities.—(Untersuchungen über die Distractionsfähigkeit der Grossen Extremitatengelenke) Dr. Schultze. (*Deutsche Ztschr. f. Chir. Band. vii, p. 76.*)

The author concludes that extension applied to an already distended joint increases the intra-articular pressure. In a case of acute synovitis of the knee-joint the excess of pressure thus produced was determined by

a manometer. The column of mercury rose after extension of 20 lbs. After the joint had been extended for four days, with six pounds, another test of the tension marked a reduction of the pressure, and when a temporary traction of 20 lbs. was then made the intra-articular pressure gave negative results. In two similar cases the intra-articular pressure was reduced in three days, but subsequent increase of traction was followed by a momentary elevation of the tension. As applied to the normal joint of a living person, an increase in the amount of extension produced a reduction of the joint pressure.

The following is to be expected generally from extension in diseased joints: 1st. Reduction of the injurious pressure of the joint surfaces against each other. 2ndly. Improvement in the position of the limb. 3rdly. Reduction of the cicatricial contraction of the synovial membrane. 4thly. Facilitation of the absorption of the fluids accumulated in the articulation. Extension is thus indicated in acute purulent or serous, in fungous or chronic purulent inflammation of joints, and finally in perverse positions of the limb.

The author produced a separation of the joint surfaces of the hip-joint by moderate weights (10 to 12 lbs.) on the cadaver. He applied the extension, however, directly to the femur by adhesive plaster, in a way which would be difficult to imitate in the living subject. In the knee and ankle joint 8 to 12 lbs. not only reduced the articular pressure, but continued traction brought about a very marked degree of separation. He concludes that the method of extension as used by Volkmann is the most appropriate, and states that those cases of coxitis treated by Lücke in his clinic, by the extension method, yielded satisfactory results.

On the Excision of the Epiphyseal Cartilages for the Remedy of Certain Deformities of the Skeleton. By M. Ollier of Lyons. (*Lancet*, April 14th 1877.*)

The particular deformities for the remedy of which M. Ollier recommends this procedure are those affecting the parallelism of the bones of the fore-arm and leg following fracture, separation of the diaphysis and osteitis occurring during the period of bone growth.

He cites the following cases which are given in detail in the papers mentioned in the foot-note below. The first case consisted in an arrest of development of the tibia, following an osteitis of the inferior juxta-epiphyseal region of the bone. The growth of the fibula was not interrupted and as a result of this inequality, there occurred a progressive in-

*See also:—*Revue Mensuelle de Med. et de Chirurg.* Feb. 1877 and “*Du moyens d’augmenter la longueur des os et d’arreter leur accroissement*”. *Comptes Rendus* 1873.

curvature of the latter bone, a dislocation of both of its extremities, and a condition of talipes equino-varus. The two epiphyseal cartilages of the fibula were excised, and the result was an entire re-establishment of the relations of the inferior extremities of the tibia and fibula and the disappearance of the talipes.

The second case was one of suppurative osteitis of the diaphysis of the radius extending to the inferior epiphyseal cartilage, causing an arrest of development of the bone and preventing it from keeping pace with that of the ulna. Dislocation of the inferior extremity downwards and backwards ensued, with an inclination of the hand to the radial side. Mechanical treatment proved unavailing. A partial destruction of the inferior epiphyseal cartilage of the ulna resulted in a progressive and spontaneous straightening of the hand.

I have recently seen two cases which illustrate the condition described by M. Ollier. The first is now in the Orthopedic Hospital. An osteitis affecting the epiphysis of the tibia has resulted in an arrested development of that bone to the extent of $\frac{1}{4}$ of an inch. The nutrition and development of the fibula have been unimpaired and its upper extremity is nearly on a line with the tibio-femoral articulation, while the external malleolus is pushed down considerably.

I saw the other case in consultation with my friend Dr. N. B. Emerson. Its history is as follows: Between two and three years ago, the child (now 12 years old) sustained an injury of the tibia of the left side near its lower extremity, while at play. After some weeks the child was able to walk, and no deformity was immediately noticed. Later a diminution in the size of the internal ankle was observed, and as the girl grew the foot was seen to be slightly turned in, and the natural curve just above the injured malleolus internus became more marked. The patient complained of fatigue after walking a considerable distance, but as the foot and limb performed their natural functions, no especial attention was paid to the deformity. About fifteen months ago, however, the child's mother noticed a slight lateral curvature of the spine. This has been slowly progressive, but is still not very marked. It was for this condition that our advice was sought.

Upon measurement of the lower extremities (carrying the tape to a point even with the sole of the foot, as the external and internal malleoli were both altered in their appearance and relation to the tarsus), a difference of $\frac{1}{8}$ of an inch was found. A measurement of the relative length of the two tibiae and fibulae showed that the latter were of equal length while the uninjured tibia was 15-16th of an inch longer than its fellow.

As in the previous case, the uninjured fibula had outgrown the tibia, and each of its extremities was displaced and very prominent. An artificial support equal to the difference between the length of the tibiae, placed under the sole of the affected limb, caused the scoliosis to disappear. The question of the excision of the cartilage was discussed, but its further consideration postponed until the patient's return from the country in the autumn.

M. Ollier reaches the following conclusions ; 1. The increase of the length of the bones is arrested by excision of the epiphyseal cartilages, an operation which gives the same results in man as in animals. 2. The excision of these cartilages affords a rational example in the case of unequal development of the parallel bones of the arm and leg. If the development of one bone is impaired, the other becomes relatively too long, and various deformities ensue. 3. By arresting the growth of the uninjured bone, they both progressively acquire their natural direction. 4. This operation is not applicable to all bones, but is especially adapted to those of the leg and fore-arm. The epiphyseal cartilages may be there attacked without danger, provided the operator interferes with the superficial aspects only—or at all events takes great care not to involve the deeper. After operating, the limb should be placed in a silicate bandage. 5. It is more effectual and rational than the resection of a portion of the diaphysis, and the operation should be proposed whenever the mal-position of the foot or hand does not yield to mechanical treatment, and especially so when the progressive nature of the deformity exposes the patient to an increase thereof.

The Treatment of Genu-Valgum;—By F. R. Fisher, F. R. C. S. (*Lancet* Jany. 20th 1877.)

Mr. Fisher concludes, after an extensive experience in the treatment of this deformity—many of his cases being of the severest type:—“That it may be most effectually relieved by the manipulation of the limbs and the use of proper instruments, without any operation”. He states that “genu-valgum arises always from ligamentous weakness”, and that “the ligaments of the knee-joint being thus affected are unequal to the task of sustaining nearly the entire weight of the body; they give way, and the inner side of the joint being the least protected, knock-knee naturally results.” The principle of Mr. Fisher's treatment is to overcome the contraction of the external ligaments and to strengthen the weaker internal ones. The method of accomplishing this is thus described ; “The femur being held firmly round the inner condyle with one hand, and so fixed, the leg is grasped with the other hand above the ankle on the out-

er side and then gently and firmly pressed in a direction inwards." This should be repeated morning and evening, the limb being placed in a retaining splint, so as to maintain the advantage gained by the manipulation. Douching with cold water and friction facilitate the improvement. In slight cases, the instrument used consists of an ordinary straight splint bandaged on the outside of the limb. The "trough splint" is used in aggravated cases—only however as a retaining power. Mr. Fisher thus describes it: "It consists of thigh and leg pieces of a trough shape in which the limb is firmly held by webbing straps." These pieces are connected at the knee by a ratchet joint having a lateral action. There is also a good broad knee-cap. After the limbs are straightened, supports should be worn for some time to prevent relapse.

Prophylaxis of Fungoid Arthritis with particular Consideration of Chronic Osteomyelitis and Treatment by Igni-puncture.—(Zur Prophylaxis Fungosen Gelenkentzündung mit besonderer Berücksichtigung der Chronischen Osteomyelitis und ihrer Behandlung mittelst Igni-punctur). Dr. Kocher. (*Sammlung Klinicher Vorträge*, No. 102.)

The author advises the use of igni-puncture in cases of chronic osteitis, and the instrument he uses for this purpose consists of an iron heated to redness, from the end of which a point projects 4 or 5 centimetres. In superficial bones, like those of the tarsus, the instrument is simply sunk through the skin deeply into the bone; the pain is described as trifling—no anæsthetic being necessary in adult patients. In deeper bones it is desirable to make a small incision through the soft parts. So as to make the operation as nearly as possible a subcutaneous one, the antiseptic spray and dressings are used with the idea of avoiding suppuration and the formation of a fistula. For the purpose of immobilization, the gypsum bandage is applied to the articulation. The author has used this method in all parts of the body and in a considerable number of cases. In nineteen of them he reports favorably. These remarks the author applies especially to those cases where osteitis is a factor in producing diseases of the joints, and a number of cases are cited which demonstrate that osteitis, both chronic and sub-acute, frequently leads to secondary affections of the joints.

The first salient point in the differential diagnosis of primary synovitis from osteitis, the author points out, is the long continuance of a fixed pain, and a debility of the limb.

The author regards traumatism as playing an important role in the etiology of joint disease—especially that dependent on osteitis, and he says that the total removal of the diseased tissue by "scooping out", resection

or extirpation in all cases of established purulent or fungoid inflammation (osteitis ulcerosa) is thoroughly indicated.

Subcutaneous Osteotomy.—The *Lancet* remarks, (*Annotations*, Feb. 3rd. 1877), that the discussion of subcutaneous section of the neck of the thigh "is really being worn almost threadbare." In this country however, the operation has not received the same practical attention as abroad, and we may be pardoned for referring to it again. The application of subcutaneous osteotomy to many conditions of deformity, its simplicity, slight risk and satisfactory results are certainly points in its favor. Before the Clinical Society (*Lancet* Feb. 3rd.) a paper on the subject by Mr. Broadhurst was read. Two cases were reported where the operation had been performed for mal-position following *morbus-coxarius*. In the first the disease had existed for ten years (patient æt. 18) and the result reported twelve years after the operation was a useful limb with good motion. In the second case (of seven years duration) the result was satisfactory. Mr. Croft showed a successful subcutaneous section of the thigh bone for old ankylosis of the hip-joint, performed in July 1876. The bone was divided with a saw below the trochanter major. Antiseptic precautions and dressing did not prevent suppuration, which was very profuse. The patient recovered and was present at the meeting of the Society. The discussion, which was opened by Mr. Barwell, was chiefly on the anti-septic measures, and the respective merits of Volkmann's chisel and Adam's saw.

Opinions were divided. "All are agreed", as the *Lancet* observes, "that the section of the femur is an allowable and often successful operation; that it may be done rapidly and easily with either a chisel or a saw, and that as little disturbance of the parts around and as little entrance of air as possible are objects to be sought." Each surgeon will, of course, be guided by his judgment in the matter, and it will require, probably, a large number of cases to decide which instrument is better adapted for dividing the bone.

Osteotomy in Genu-Valgum. (*Berliner Klinische Wochenschrift*, No. 52, 1876, and *London Med. Record*, Feb., 1877.) Dr. Max Schede reports four cases of genu-valgum treated by removing, after Rhea Barton's method, a wedge-shaped piece from the tibia and a division of the fibula. The upper third of each tibia was exposed by a vertical incision on the inner side of the leg, the periosteum being also divided and turned forwards and backwards. The shaft of the fibula was then cut through by a chisel. A wedge of bone was removed from the tibia by means of a small and narrow saw. The base of each wedge was

about two centimetres wide. Lister's antiseptic measures were closely followed, and Esmarch's bandage employed. Care was, of course, taken to remove all fragments of bone. Considerable difficulty was experienced in straightening the limb, owing to the resistance of the soft parts, and extension was used to prevent a return of the deformity during the continuance of the antiseptic dressing, and subsequently, plaster of Paris bandages. The wounds in the left leg healed rapidly, while in the right free suppuration occurred. This was attributed by the operator to the presence of a small piece of detached bone, overlooked at the close of the operation. After the removal of a small sequestrum, the discharge soon ceased and the patient made a good recovery. Considerable distortion of the feet, dependent on the position prior to the operation, remained after the operation was performed—the phalanges and metatarsal bones being turned inward to a considerable extent. In the other cases good results were reported.

Sub-cutaneous Division of the Surgical Neck of the Humerus in a Case of Old Sub-coracoid Luxation. (*Brit. Med. Jour. Jan. 20th, 1877.*) Dr. J. Ewing Mears, of Philadelphia, in a communication to Mr. W. Adams, of London, reports a case of this kind where the operation was performed for the relief of pain and immobility consequent upon the luxation. The patient was 38 years old, and the dislocation had existed for 2 years and 4 months. A small puncture was made with a long-handled tenotome, and the bone divided with Adam's saw. Not a drachm of blood was lost, and the wound healed in three days. The patient was free from pain from the day of the operation, and he has gradually acquired good motion in the new articulation. Dr. Pancoast also states, in a communication to Mr. Adams, that he has examined the case and found "a good deal of motion at the point of section, the patient being able to move his arm readily across his chest and bring his hand up to the top of ear at the other side of head." Mr. Adams closes his letter as follows: "When the section through the bone is made with the saw, without any breaking or splintering of bone, and extension and passive motion are employed soon afterward and steadily persevered in, free motion may be obtained." To Dr. Mears belongs the honor of first introducing osteotomy for the relief of old dislocations.

A New Osteoclast with a Report of Cases, by Dr. C. Fayette Taylor. Remarks made before the New York Academy of Medicine, April 5, 1877. (*N. Y. Medical Record, April 21st, and N. Y. Medical Journal, June, 1877.*)

Dr. Taylor has devised an apparatus which permits the surgeon "to

produce a transverse fracture at any selected point with ease, and certainty and safety from after complications." It is especially adapted for the deformity occurring after ankylosis in hip-joint disease, and the case in which it was used was one "where the right thigh was adducted to the fullest possible extent, flexed at a right angle with the pelvis, and fixed in that position by a firm ankylosis" Fracture at the elected point was obtained by the use of the osteoclast, and though union was slow ("on the fiftieth day motion was readily detected at the seat of fracture") the ultimate result was extremely satisfactory. The apparatus is fully described and illustrated with plates in *The Medical Record*, No. 337.

Treatment of Inflammation of the Knee-Joint. (Der Therapie der Knie-Gelenks-entzündung.) L. Mayer. (*Bair. Arztl. Intelligenz Blatt*. 1877, No. 5, pp. 46-52.) The author recommends the following therapeutical agents: 1. In Acute Synovitis: leeches, opium if indicated, compression and the ice bag. Internally a laxative of calomel: if after three weeks there still exists an exudation and limitation of motion, Tr. Iodine, elastic compression and massage are advised. 2. In Chronic Synovitis puncture and energetic compression. 3. In Purulent Synovitis he makes an incision an inch long and uses Lister's drainage tube; also, extension with weights of 10 or 15 pounds. In Fungous Synovitis (a) non-purulent: extension and injection of carbolic acid; (b) purulent, iodine; (c) with destruction of cartilage in children, opening of joint and gouging; in adults, resection. 5. Epiphyseal Osteitis, igni-puncture at painful points of bone. When the bone is perforated, with destruction of articular surfaces, a resection should be made as soon as possible (after Lister's method).

RECENT PAPERS.

(*January 1st to July 1st, 1877.*)

On Torticollis. By Dr. A. J. Steele. (*Trans. of the Medical Association of the State of Missouri*, 1876.)

A new Anthropometer, or a Simple Apparatus for Determining the Irregularities of the Length of the Legs. By B. F. Gibbs, M. D. (*Am. Jour. of Med. Sciences*, Jan., 1877.)

Description of an Apparatus Devised by Dr. Thomas G. Morton for Measuring any Irregularities in the Length of the Lower Extremities. By Stacy B. Collins, M. D. (*Am. Jour. Med. Sciences*, Jan., 1877.)

Report on Pott's Disease, or Caries of the Spine, Treated by Extension and Plaster of Paris Bandage. By Lewis A. Sayre, M. D. (*Trans. Am. Medical Association*, 1876.)

On Malformations of the Foot and Géneral Troubles Determined by Foot Coverings, with High Heels. By Dr. J. Onimus. (*L' Union Medicale*, Feb. 13, 1877.) Noticed under caption "High Heels" in *The Lancet*, Feb. 24, 1877.)

Considerations in relation to Diseases of the Joints. By David Prince, M. D. (*Amer. Practitioner*, Feb., 1877.)

On the Use of Volition and Manipulation in the Treatment of Paralytic Affections. By T. E. Maclean, B. S. (*The Lancet*, March 3d, 1877.)

Chronic Inflammation of the Wrist and Knee Joints. By L. A. Sayre, M. D. (*Phila. Med. and Surgical Reporter*, Feb. 10, 1877.)

Pott's Disease in the Cervical Region; Its Treatment. By L. A. Sayre, M. D. (*Phila. Med. and Surgical Reporter*, Jan. 27, 1877.)

Infantile Paralysis. By Wharton Sinkler, M. D. (*Phila. Med. and Surgical Reporter*, March 10, 1877.)

Paralysis and Incoördination from Congenital Phymosis. (Dr. Sayre, *Phila. Med. and Surgical Reporter*, Jan. 13, 1877.)

Phymosis, Incoördination of Movements, with loss of Equilibrating Powers. Dr. E. P. Hurd. (*Boston Med. and Surg. Journal*, Jan. 18, 1877.)

Hysterical Muscular Contraction. By W. A. Hammond, M. D. (*Journal of Mental and Nervous Disease*, Jan., 1877.)

Extreme Distortion of the Bones of the Legs from Rickets; Division of one Tibia with a saw and the other with a chisel: Satisfactory Results. Victoria Hospital for Sick Children. Service of Mr. Colwell. (*Lancet*, March 24, 1877.)

Pott's Disease, Lumbar Abscess. Treated by C. F. Taylor's Spinal Assistant. Prospective Recovery. By Benj. H. Reggs, M. D. (*Richmond and Louisville Medical Journal*, March, 1877.)

Correspondence on the After Treatment of Excision of the Hip-Joint. By Surgeon-Major J. H. Porter and J. W. Hulke, Esq. (*British Med. Journal*, Feb. 24, March 10 and March 24, 1877.)

On the Simplification of Orthopaedic Apparatus. By Edmund Andrews, M. D. (*Archives of Clinical Surgery*, April 15, 1877.)

The Lateral Movements of the Knee Joints in White Swelling. By M. Moutard-Martine. (*Le Progres Medical*, Feb. 3, 1877.) (Abs. in *N. Y. Med. Record*, April 14, 1877.)

The Strumous Element in the Etiology of Joint Diseases; Analysis of 860 cases. Paper read before the Medical Society of the County of New York. By V. P. Gibney, M. D. (*N. Y. Medical Record*, April 28, 1877.)

Rotary Lateral Curvature and a Question of Priority. Correspondence. Drs. Benj. Lee and L. A. Sayre. (*N. Y. Medical Record*, May 26, 1877.)

The Plaster of Paris Jacket and a Question of Priority. By W. C. Shaw, M. D. (*N. Y. Medical Record*, June 9, 1877.)

A Method of Measuring the Lower Extremities. By Richard O. Cowling, M.

D. (*N. Y. Medical Record*, May 12, 1877.)

Removal of the Astragalus and part of the External Malleolus for Congenital Talipes Equino-Varus. By Erskine Mason, M. D. Report of N. Y. Pathological Society. (*N. Y. Medical Journal*, June, 1877.)

The Operative Treatment of Genu-Valgum. By Alexander Ogston, M. D. (*Edinburgh Medical Journal*, March, 1877.)

Taylor's Apparatus for Pott's Disease in the Cervical and Upper Dorsal Regions, mounted on Plaster of Paris Jacket. By Charles P. Putnam, M. D. (*Archives of Clinical Surgery*, June 15, 1877.)

Hip Disease, paper on. By Dr. C. P. Putnam. Proceedings of the Boston Society for Medical Observation. (*Boston Med. and Surg. Journal*, April 26, 1877.)

Case of Disease of the Trochanter Major—Operation—Cure. Surgical Clinic of Prof. Toland. (*The Western Lancet*, May, 1877.)

Treatment of Enlarged Bursae about the Knee Joint, with cases. By Prof. Toland. (*The Western Lancet*, March, 1877.)

Contributions to Orthopaedic Surgery. By Lambert H. Ormsby, F. R. C. S. (*Med. Press and Circular*, Jan. 3, 1877.)

On an Extension Apparatus for the Treatment of Fractures and Certain Deformities of the Lower Extremities. By William Stokes, F. R. C. S. (*Med. Press and Circular*, Feb. 7, 1877.)

The Dublin Orthopaedic Hospital: a Brief Account of the Practice pursued therein. By Robert Lafayette Swan, F. R. C. S. (*Med. Press and Circular*, Feb. 14, 1877.)

Discussion on Mr. Swan's Paper. Report of the Surgical Society of Ireland. (*Med. Press and Circular*, Feb. 14, 1877.)

A Brief Account of the Mechanism of the Hip-Joint. By H. Oscar Allis, M. D. (*Phila. Med. and Surgical Reporter*, April 7, 1877.)

Discussion on Dr. Allis' Paper. By the Philadelphia County Medical Society. (*Med. and Surg. Reporter*, April 14, 1877.)

Complete Congenital Dislocation of the Tibia Backward. By Dr. E. Mason. Report of the New York Pathological Society. (*N. Y. Med. Record*, Jan. 20, 1877.)

Fracture of the Bodies of the Vertebrae: Great Deformity—Recovery. Bellevue Hospital Report. (*N. Y. Medical Record*, Jan. 13, 1877.)

Contraction of the Fingers (Dupuytren's Contraction) and its Treatment by Subcutaneous Division of the Palmar Fascia and Immediate Extension. By William Adams, F. R. C. S. Proceedings of the Royal Medical and Chirurgical Society. (*Lancet*, June 9, 1877.)

Suspension as a Means of Treatment in Spinal Distortions. By Dr. Benj. Lee. Paper Read before the Amer. Med. Ass'n. (*N. Y. Medical Record*, June 23, 1877.)

On the Treatment of Angular Curvature of the Spine by the Plaster of Paris

Bandage. By Richard Barwell, F. R. C. S. (*The Lancet*, June 9, 1877.)

On Reflex Muscular Contraction and Atrophy in Joint Diseases, with Remarks on Extension and a Description of New Apparatus. By Newton M. Shaffer, M. D. (*Archives of Clinical Surgery*. June 15, 1877.)

GERMAN PAPERS.

The Mechanism of the Hip-Joint. (Zur Mechanik des Huftgelenkes.) By Prof. E. Albert, of Innsbruck. (*Medizinische Jahrbucher. Series 1876, vol. II.*)

The Shape of the Head of the Femur. (Die Gestalt des Femurkopfes)—Response to the above. By Prof. Abey, of Bern. (*Ibid, Series 1877, Vol. I.*)

The Mechanism of the Hip-Joint. (Zur Mechanik des Huftgelenkes.) An answer to Prof. Abey's open letter. By Prof. Albert. (*Ibid, 1877, Vol. II.*)

A Case of Resection of the Elbow-Joint, with Remarks Pertaining to the Question of the Final Results of Resection of Joints. (Ueber einen Fall von Ellenbogengelenks—Resection; nebst Bemerkungen über die Frage von den Endresultaten der Gelenks—Resection.) By Dr. Julius Wolff, Berlin. (*Archiv. f. Klin. Chir. XX. Band. 1V. Heft.*)

Congenital Dislocation of the Hip-Joint. (Die angeborene Huftgelenkverrenkung.) By Dr. Julius Dollenger. (*Archiv. f. Klin. Chir. XX Band. III. Heft.*)

A Nearthrosis in Inflammatory Diastasis of the Head of the Femur. (Ueber eine Nearthrosenbildung bei entzündlicher Epephysenlösung des Oberschenkelkopfes.) Dr. George Letzel. (*Ibid. XX Band. III Heft.*)

Observations upon Neuroses which appear to depend upon Spondylitis Deformans. (Beobachtungen über Neurosen welche auf Spondylitis Deformans zu beruhen scheinen. R. Rhoden. (*Deutsche Med. Wochenschrift*, 1877, Nos. 40 and 41.)

A Proposal to treat Coxitis at its Inception by a Combined Procedure in the Employment of Extension. (Vorschlag zu einem Methodisch Combinirten Verfahren bei Behandlung beginnender Coxitis mittelst der Distraction-methode. A. Bidder. (*Archiv. f. Klin. Chir.*, 1876. *XX Band. II. Heft.*)

On the Pathology and Therapeutics of Pott's Kyphoses. (Zur Pathologie und Therapie der Pott'schen Kyphose.) By Dr. Albert Aaronheim. (*Deutsche Zeitschr. für Prakt. Med.* 8 vo. 28 pp. *Peiser, Berlin.*)

Hydrops Fibrinosus of the Joints. (Ueber den Hydrops febrinosus der Gelenke. Aus der Volkmann'schen Klinik.) By Hans Ranke. *Arch. f. Klin. Chir. XX Band. II. Heft.*)

Intra-articular Injuries to the Knee. (Ueber intra-articulare Verletzungen am Knie.) Prof. Leopold Dittel. (*Med. Jahrb. Series 1876. III Heft.*)

The Occurrence of Neoplastic-form Elements in Inflamed Tendons. (Ueber das

Vorkommen Neugebildlter Formelemente in Entzundeten Sehnen.) By Arnold Spina. (*Med. Jahrb. Series* 1876, *III. Heft.*)

The Anatomy of the Bones of the Tarsus. (Zur Anatomie der Fusswurzelknochen.) By Dr. E. Zuckerkandl. *Med. Jahr. Ser. 1876. III. Heft.*)

On Arthrotomy. (Ueber die Arthrotomie.) By Dr. Wiener. (*Med. Presse*, 1876. *No. 20 et seq.*) By Prof. E. Albert.

FRENCH PAPERS.

The Expediency of Resection in Osseous Coxalgia. (De l' Opportunité de la Resection dans la Coxalgie Osseuse.) By M. Bandon. (*Bull. Soc. d. Chir.* p. 678, 1876.)

Genu-Valgum treated by Delore's Method. (Genu-Valgum traite par la Méthode de Delore.) By M. Delore. (*Bull. Soc. de Chir. Tome II.* pp. 559-574. 1876.)

Abscess of the Popliteal Space. (Sur les Abcès du Creux Poplite.) (*These de Paris*, 1876.)

On the Mechanism of Apparent or Real Shortening of the Limb in Coxalgia. (Du Mécanisme du Raccourcissement Apparent ou Réel du Membre dans la Coxalgie.) By M. Deyde. (*These de Paris.* No. 426, 1876.)

Curable Paraplegia in Potts' Disease. (De la Paraplegie Curable dans le Mal de Pott.) By M. Louis Ricard. (*These de Paris*, 1876.)

Angular Deformity of the Inferior Extremity of the Leg with Inversion of the Foot in a Child. (Déformation Angulaire Inferieure de la Jambe, avec Renversement du Pied chez un Enfant.) By Mm. Thetat and Lucas-Championiere. (*Soc. de Chir.* p. 675, 1876.)

Remarks on Genu-Valgum. (Observations sur le Genu-Valgum.) By M. Auger. (*Bull. et Mem. de la Soc. d. Chir. Tome II.* No. 7. Continuation of same in No. 8.)

Angular Deformity of the Lower Extremity of the Leg. (Déformation Angulaire de l' Extremité Inferieure de la Jambe.) By M. Trelat. (*Bull. Soc. d. Chir. Tome II.* No. 8.)

Intermittent Torticollis. (Torticollis Intermittent.) By Dr. Bertrand. (*Gaz. des Hopitaux*, Feb. 17, 1877.)

Pott's Disease. Abscess by Congestion. Cure without Opening Abscess and without Deformity. (Mal de Pott. Abcès par Congestion. Guérison sans Ouverture de l'Abcès et sans Gibbosité.) (*Gaz. des Hopitaux*, March 24, 1877.)

Research on Crepitus in Incipient Dry Coxo-femoral Arthritis. (De la Recherche de Craquements dans l' Arthrite Séche Coxo-fémoral au Début.) By M. Gosselin. (*Gaz. des Hopitaux*, May 17, 1877.)

Notes on a Case of Spontaneous Perforation of the Popliteal Artery in White Swelling of the Knee. (Note sur un Cas de Perforation Spontanée de l' Artère Poplitée dans une Tumeur Blanche du Genou.) By M. L. Bard. (*Lyon Medical Vol. XXIV. Nos. 11 and 12.*)

ITALIAN PAPER.

Fungous Synovitis of the Knee-joint may Originate and Develop itself by Preference in the Femoro-patellar Articulation (La Sinovite Fungosa del Quinncchio puo avere Originie Svolgersse a Preferenza nell' Articulazione Femoro-rotula.)
By G. Ruggi, (*Bullet. d. Soc. Med. de Bologna. Ser. 5. Vol. 21.*)

HOSPITAL RECORDS.

ROOSEVELT HOSPITAL, NEW YORK.

REPORTED BY J. J. CRANE, M. D., HOUSE SURGEON.

HYPERTROPHY OF LABIA MINORA—SERVICE OF DR. WEIR.

Mary Dowdal; æt. 19; New York; married; seamstress; admitted June 4th, 1877. Patient has been married three years; has had no children, and no miscarriages. Menstruation regular and natural. Three years ago the patient first noticed a swelling in both nymphæ, which gradually increased in size till the present time. Denies syphilis; has had no trouble in urination.

On admission both labia minora are found hypertrophied, forming a tumor the size of two fists. Each labium is distinct, hanging by a sort of pedicle. The meatus urinarius is drawn downward. External to the enlarged nymphæ, between them and the labia majora, is an excoriated surface, which readily bleeds and is tender. It extends down into the perineum, partly surrounding the anus and reaching as far as the ischio-rectal region.

June 12th, 3 p. m. The patient was put under ether, and the tumors removed with the galvano-cautery, by Dr. Weir. The wire being placed around the pedicle of the tumor of the right nymphæ, the poles were connected and the wire gradually burned itself through. The tumor of the left nymphæ was then treated in the same manner. The hemorrhage was very slight. The excoriated surface on the outer side of the hypertrophied labia minora, as well as the cauterized surface, was then completely covered with carbo-sulphuric paste, and the patient removed to the ward.

June 13th. Patient has had but little pain and no trouble with urination.

June 14th. There is considerable œdema of the labia majora. The cauterized surface still retains its coating of carbo-sulphuric paste.

June 18th. The swelling of the parts about the cauterized surface has almost entirely subsided, the slough has separated, and there is left apparently a healthy ulcer.

June 23d. The ulcer is circatizing well.

July 1st. There are one or two suspicious warty-looking spots at the

lower part of the internal surface of the labia majora. Ordered to be touched with acid. chromic, gr. xx, Aqua, 3ii, every other day.

July 12th. Discharged, cured.

ILIAC ABSCESS TREATED ANTISEPTICALLY.

Michael Larkin; æt. 24; New York; single; nurse; admitted April 2d, 1877. Patient has always been perfectly healthy, with the exception of once having had necrosis of the tibia. Has never had syphilis. Was employed in the hospital until the 7th of last March, when he was seized with "pain and stiffness in the back." He can give no reason for it, but says that it might have been caused by carrying a very heavy man in a stretcher, and getting his feet in the snow at the time. The pain in the back continued. The urine was examined March 15th—1010, acid, no albumen; it was clear and normal in appearance. Being unable to work and getting no better, he went home. The pain in the back remained as it was, and in a day or two he began to have severe pain in the hip; most marked just above and behind the great trochanter. It was increased by pressure on the part. Four or five days before coming to the hospital he began to notice swelling and induration in the right groin. It became immediately painful, and got red. When this occurred the pain in the hip subsided. Bowels were constipated, and he passed his urine slowly.

On admission, patient complains of great pain in the right hip and groin. On examination a tumor is found, extending from about two inches behind the ant. sup. spine of right ilium downward and inward to near the pubis. It is distinctly marked above, but has no definite border below. It is hard to the feel, is hot and red, and the patient cannot tolerate pressure upon it. The scrotum is somewhat oedematous. Pressure upon the spine does not cause pain, nor when the head of the femur is pressed against the acetabulum by force applied at the knee is there any pain inflicted. Poultices were applied to the groin and enough morphine given to relieve the pain.

April 4th. Patient somewhat more comfortable. Given ol. ricini, 3ss, which produced free evacuation of the bowels.

April 5th. Has some trouble in passing water, it coming from him as if the bladder had lost some of its contractile power. Given a soft *Nelaton* to use as required.

April 7th. Fluctuation being detected, an incision one-half inch long was made about one inch internal to ant. sup. spine, and thirty-four ounces of thick inodorous pus evacuated.

April 8th. Patient much easier. A thin purulent matter is dis-

charged. Poultices are continued. Pulse and temperature nearly normal.

April 9th. Patient has no pain, bowels regular, no trouble in passing urine.

April 14th. The discharge from the opening is very slight; all pain has ceased. P. and T. normal.

April 24th. The sinuses remain open, and there is a constant discharge.

May 1st. A flexible catheter was introduced into the sinus, and nearly its whole length was traversed with ease. Ordered to wash out sinus every day with solution of boracic acid.

May 24th. Patient vomits occasionally; the discharge from the sinus is more free and purulent. Does not complain of pain. Bowels are not constipated, and temperature is not elevated.

May 19th. The discharge is much greater—is thicker and more offensive.

May 20th. Cavity being thoroughly irrigated with 1-40 solution of carbolic acid. The *antiseptic dressing of Lister was applied.*

May 21st. The discharge about the same. Has some phlebitis of both arms. Tr. iodine painted along the course of the vessels.

May 25th. Patient feeling much better. The discharge is diminished and is more healthy in character.

May 31st. Discharge slight in amount. But very little pain; edges of sinuses healthy and granulating.

June 10th. The cavity of the abscess has contracted very much, and the discharge is light. A catheter can be introduced only about an inch.

June 17th. Discharged, cured.

EPITHELIOMA OF TONGUE—SERVICE OF DR. H. B. SANDS.

T. F.; aged 51, native of Ireland; married; clerk; was admitted to hospital October 10th, 1876. About twelve months previous to this time, the patient noticed a little pimple in median line of tongue, about one and a half inches from its tip; it gradually increased in size and became elevated above rest of tongue. Never gave him any pain, but a little soreness.

On admission there is an epithelioma situated on the dorsum of tongue, about one-half inch from its tip, which is about two inches in antero-posterior and one inch in transverse diameter, and is quite hard to the touch. There is an enlarged gland under left angle of lower jaw.

Treatment: On October 20th, the patient was etherized and the tongue removed by Dr. Sands, assisted by Drs. Mason and Peters. The mouth

being held open by a gag, and cheek drawn back by a retractor, a strong suture was passed transversely through the tongue about an inch from its tip, and the tongue drawn well out of the mouth. A looped ligature was then passed transversely through the organ under the tumor, about midway between its anterior and posterior margins, by means of which the platinum wire of the galvano-cautery was drawn through the tongue, and looped over its dorsum posterior to the tumor, and just in front of the circumvallate papillae. When this was tightened the battery was put in action, and the wire slowly burnt its way through. The remaining part of the tongue not cut through was then engaged in the loop of wire by carrying it beneath the anterior extremity of tongue, and posteriorly behind the tumor at point of section. This then cut through in the same manner, the whole operation taking about twenty minutes, it being the design of the operator to cut as slowly as possible that there might be little danger of subsequent hemorrhage. The only hemorrhage that occurred came from the punctures made by the needles, and was very slight. The whole of the tongue anterior to the circumvallate papillae above, and the frenum below, was removed.

The patient passed a comfortable night, and did not seem to suffer any severe pain. The following day his pulse and temperature rose slightly, and as he took no nourishment he was ordered an enema of half a pint of milk. A solution of salicylic acid (1 part to 500) was used for a mouth wash.

October 24th. Pulse normal and temperature has not been above $100\frac{1}{2}^{\circ}$. The patient takes but little nourishment by the mouth, and the injections of milk are still kept up. Slough is coming away from tongue.

October 26th. Base of tongue is clearing up. Patient feels better and can swallow better than since the operation, but can take very little nourishment in that way. Retains an injection of milk, eggs and brandy to bulk of a pint and a half. Complains of feeling thirsty, but not of hunger. Since the operation he has not taken altogether half a pint of milk by the mouth.

On *October 27th* he took his milk and brandy by the mouth, swallowing with much difficulty. The slough has nearly all come away. On the *29th* he sat up for a couple of hours. Is much improved and can talk quite plainly.

From this on the improvement was steady and rapid, and he was discharged on *November 14th*, at which time the base of the tongue had almost entirely healed.

BELLEVUE HOSPITAL, NEW YORK.

LIPOMA OF FOOT.—ANTISEPTIC TREATMENT.

Charlotte Wilson, 30 ; U. S. ; widow ; nurse ; admitted June 11th, 1877 ; family history unimportant ; no history of any tumor ; patient has always been healthy ; mother of two children ; has had neuralgia and rheumatism. She states that about sixteen years ago she noticed a small, hard nodule on the under surface of the instep of the right foot. It gave her no pain or inconvenience. Since that time it has continued to grow, and for the last two years it has caused her more or less pain and inconvenience in walking. It has likewise grown more rapidly lately.

On examination it is found to be a hard callous-like tumor, taking up the whole arch of the instep of the right foot. She has no pain in it, but complains only of its inconvenience. It is quite freely movable on the parts beneath.

June 14th. Patient etherized and tumor removed by the House Surgeon. An incision was made across the tumor from one side of the foot to the other. It was then enucleated, the knife being used only to cut the fibrous bands which connected it to the surrounding parts. It was found to be a lipoma, with a large amount of fibrous tissue. It had extended into and beneath the deep plantar fascia, while externally it was subcutaneous. An oval piece of integument was removed with it. A V-shaped piece was likewise cut away from the posterior flap. Three ligatures were applied to bleeding points. Carbolic acid spray was now directed on the part, and silver wire sutures inserted in all but the outer part of the incision, which was left open for drainage. Compresses were applied over the wound, and antiseptic dressing used. The whole foot was now enveloped in cotton batting.

June 15th. Dressed under spray, and antiseptic gauze applied. There has been no hemorrhage. Temperature A. M. $98\frac{1}{4}^{\circ}$.

June 20th. Temperature continues normal. Dressed daily antiseptically.

June 22d. Stitches removed ; wound well knitted ; straps applied. There has been no purulent discharge from the wound.

The case is worthy of note from the rarity of the situation, fatty tumors seldom being found on the foot.

EPITHELIOMA OF SCALP.

Ellen Casey, 55 ; Ireland ; widow ; admitted June 6th, 1877. Pa-

tient states that there is no history of any kind of tumor in her family ; she does not know what her father died of ; mother died of phthisis. She states that about two years ago she received a blow on the back of her head, but got entirely well of it. About twelve months ago she noticed a small hard lump at the seat of injury. This did not cause either pain or inconvenience. Since that time it has steadily increased in size until about two months ago. During this time there has been occasional pain in it. About two months ago it opened spontaneously, and quite a large amount of fetid thick pus came from it. The swelling, which had reached the size of a hen's egg, now became much smaller. For the last two months it has continued to discharge pus ; the paroxysms of pain have increased in frequency. The tumor has gradually increased in size, and she has had dizziness and pain in head, especially when moving about. She says she is unable to walk. On examination there is found to be a projecting tumor on left side of head, over about the middle part of the suture joining occipital and left parietal bones. It is circular in form, and about two inches across. It protrudes from the surface of scalp about an inch. The entire surface of tumor presents an ulcerated appearance, and is covered with purulent secretion. There is an enlarged gland in the neck on the same side.

June 21st. At first she would not consent to an operation. It has been bleeding repeatedly, has grown quite rapidly and gives off very disagreeable odor. She has now, however, consented. To-day she was etherized. Scalp about tumor shaved, and an elliptical incision about two and a half inches long made around it, the longest diameter of incision being nearly vertical. Incision was made only through integument, structures and the mass came away easily, not being attached at all to any of the deeper structures. Hemorrhage was very profuse for such a small wound, all the capillaries being enlarged. Only three ligatures were applied and pressure arrested all other bleeding. Sheet lint, saturated in carbolic acid water (1 per cent.) bandaged firmly over wound. Tumor examined microscopically is found to be an epithelioma of large pavement cell variety. The surface of tumor had become very jagged, and appeared like an aggregation of warts. The operation was performed by the House Surgeon, and under direction of Dr. Stephen Smith.

June 23d. There has been hardly any rise in temperature. Wound in good condition.

BIBLIOGRAPHY.

ANALYTICAL AND CRITICAL REVIEWS.

Atlas of Skin Diseases. By Louis A. Duhring, M. D. Philadelphia, J. B. Lippencott & Co., 1877.

After considerable delay, which, however, we are assured will not again occur, the second part of Duhring's atlas has appeared. The present part contains, as did the first, four illustrations, which are marvels of art. The first picture of *acne* is one of the best delineations of that polymorphous affection which we have seen; while the second, illustrating *ichthyosis*, is admirable as showing the more sombre tints of skin diseases. The two remaining illustrations portray *tinea versicolor* and *non-parasitic syrosis*. The artist has succeeded well in imitating the color of the parasitic affection, making a very accurate picture. The very best of all the illustrations is that of *syncosis non-parasitica*, which is certainly a triumph of art.

The second part more than sustains the good opinions produced by the first and we feel assured that Dr. Duhring's atlas, when complete, will be one of the most valuable works of its kind thus far published.

NOTE.

In Dr. Piffard's report in last month's issue of the ARCHIVES, two serious errors occurred.

Page 108, fifth line from top should read

Sodæ arsenitis.....0.10 (gr. iss)

Page 108, nineteenth line from top, should read

Iodinii.....1.00 (gr. xv)

ARCHIVES OF CLINICAL SURGERY.

VOL. II, No. 5.

AUGUST, 1877.

Whole No., 14.

ORIGINAL ARTICLES.

ON THE VARIOUS FORMS OF PRURITUS CUTANEUS, AND THEIR TREATMENT.*

BY

R. W. TAYLOR, M. D.,

Professor of Diseases of the Skin in the University of Vermont. Physician to Charity Hospital, N. Y.

In preparing the short paper, requested by your honorable body, on pruritus of the skin, I have limited myself to the consideration of that functional derangement in which there is itching of greater or less intensity without originally any lesion of the skin appreciable to the naked eye. I shall not, therefore, include that exudative papular disease named prurigo, nor shall I, other than incidentally, treat of itching as a complication of affections of the skin proper. Let me here remark, that one example of progress made in the study of skin diseases is offered by the subject of this paper, which was at one time called both prurigo and pruritus; while now it is proved that there is a distinct morbid entity called prurigo, with severe symptoms and visible lesion, and it is also clearly settled that there is a functional disorder of the skin without any primary lesion of that tissue, due to various causes, the symptom of which is, in short, itching. Pruritus of the skin or itching then, is not a disease, a morbid entity, but a functional disorder of that tissue occurring under the most varied circumstances. It is of especial importance in every case of this affection that its cause be as far as possible accurately determined, for upon the conclusions thus obtained many of the therapeutic indications are based.

* Read before the Burlington Medical & Surgical Club, at Winooski, Vermont, May 14th, 1877.

Allow me then, though I shall, undoubtedly, state facts well known to you, to sketch briefly the chief causes of pruritus, which I think can be arranged conveniently in the following manner :

1st. That itching which is caused by external agents, such as rough clothing, woolens (colored and otherwise), harsh friction, such as with towels, certain soaps and baths, and last, but not least important, certain parasites, chiefly animal, also vegetable.

2d. Pruritus from internal causes, such as Bright's diseases; visceral diseases, such as gastro-intestinal and hepatic, and sometimes pulmonary; and malaria; also from plethora and from that condition of suboxidation which is frequently an accompaniment of the gouty and rheumatic state, but which may exist without such complication, as a morbid condition, in which the process of destructive metamorphosis of the tissues is imperfectly performed, and we find as a tangible evidence of it, besides the symptoms of which itching is very often a prominent one, a great excess of such solid matters of the urine as urea, uric acid, and oxalate of lime. Then we may mention diabetes as a not infrequent cause of pruritus, which also is observed in the course of various nervous disorders and tumors in the brain and cord.

3d. The pruritus which follows certain affections of the skin, themselves being attended most frequently with itching, and burning combined with itching. These are the various erythematous affections, urticaria, eczema, scabies, pediculosis, measles, scarlatina, sometimes small pox, and heat eruptions.

4th. We have pruritus, caused in great part by the structure or conformation and condition of the parts involved, such as pruritus vulvae, pruritus ani, pruritus of scrotum, and femoro-scrotal pruritus; these, though largely induced, as said, by the condition of the parts, may also be induced or caused, or at least perpetuated by various other causes.

5th. There is the pruritus of old persons, in which there may or may not be visible lesion of the skin; sometimes, however, there is well marked atrophy; also, that itching of certain parts which from its development every winter has been called by Duhring and Handschuh, pruritus hiemalis. Finally, certain drugs, notably opium, induce cutaneous pruritus.

The chief importance of these facts consists in the indications which they suggest for the treatment of internal conditions, as well as for the removal of the causes which are ascertained to be in operation. Let us then briefly run over these general facts before we come to a consideration of the topical remedies in general.

First, then, as to external agents we all know that many persons can not bear the application of flannel to the skin, and I have frequently cured severe pruritus by simply ordering gauze cotton undershirts to be worn under flannel. The same may be caused by gloves and stockings, as many patients complain of great itching of the hands and feet from wearing these articles in woolen. One of the most severe cases of chapped hands seen by me during last winter, began as a pruritus, caused by an extra thick pair of woolen gloves. Blue and red woolen also have been observed to cause pruritus, which ceased when a white article was worn. Pruritus, mostly of an ephemeral character, however, has been known to be caused by the use of stimulant applications, and of soaps of a too caustic nature; also by the too vigorous use of ordinary soaps, particularly of such rough stimulating agents of the skin as flesh brushes, Turkish towels, etc. The scope of this paper does not permit a full consideration of the relation of parasites to itching, but to be moderately complete I must mention certain facts. Cases certainly come before us in which we are in great doubt as to whether the itching is caused by an insect or whether it is due to other causes. Thus it may be in a patient in whom the suspicion of lice would not usually be entertained, or again the lesions observed may not be well marked. These cases have often puzzled me, particularly in elderly people of the better class, especially where the itching has been rather generally distributed, for if it is localized, as for instance to the genitalia or anus, we have important aids to diagnosis. In these cases of more extensive pruritus, if the symptom is worse on the back, shoulders, over the scapulae and about the waist, where the clothes are drawn tight, the suspicion of pediculi, is to say the least, well warranted. Further, the skin must be carefully examined, and then if we find minute pin-head sized blood crusts, with little or no surrounding hyperaemia, we have almost positive evidence of a parasitic cause. I mention these facts at the risk even of being tedious, as so much importance depends upon a correct diagnosis, and again, as in some cases, we fail to find the pediculus itself, though sought for long and patiently. Having ascertained that the cause is the parasite, the first indication is to attack his habitat, namely, the clothes, which will be required to be ironed, particularly at the seams, or in some cases it may be necessary that they shall be boiled. I always direct that perfectly clean underclothes shall be worn after the application of remedies to the body. Of course, I cannot here enter into the treatment of Bright's disease in its varied forms; suffice it to say, that in certain cases of more or less extensive pruritus, this condition of the system

causes the cutaneous irritation, which is much relieved when the cause is reached by the various means which we use in that disease, and is further remedied by local applications. It is well, then, in cases of pruritus occurring in middle and advanced age, to look after the condition of the kidneys, especially if the cause of the symptoms is at all obscure and if any suspicion arises as to the presence of Bright's disease. The same general remarks in similar conditions apply to the search after hepatic disorder, malaria, phthisis, and chronic gastro-intestinal affections. I now call to mind a gentleman, who having a flatulent dyspepsia with acid eructations, had also pruritus of the trunk and thighs, which was much relieved when the condition of his digestive system was improved. I feel that I cannot lay too much stress upon that condition of the system in which pruritus is found in persons whose urine is of high specific gravity and heavily laden with those resulting products of suboxidation of the tissues, namely, uric acid and oxalate of lime, and again those in which there is an excess of urea, for among other well marked symptoms, pruritus is often a very distressing one, involving either large portions of the cutaneous surface, the extremities most frequently, and also upon the trunk, and also localized to the scrotum, to the scroto-femoral angle, and also to the anus. This condition, I think, will be found to be present in many cases of pruritus of the anus and of the genitals. The same state of the urine is also observed in gout and rheumatism, which diseases are often accompanied by pruritus, which however, is, I think, usually localized as to the parts just mentioned, in rheumatism more frequently than in gout, in which often large territories of skin become pruritic, and constitute a very distressing complication. In such cases as these attention to the diet is of first importance, the amount of albuminous and starchy food ingested must be carefully regulated; in fact, the diet must be plain and easily digestible. Fresh air and exercise have also much influence, and such therapeutic remedies as mercurial cathartics must be frequently used. But of the greatest importance is the prolonged use of alkalies, which must be administered with care and judgment, as I have said, for long periods. In my experience the acetate, citrate, or bi-carbonate of potassa have proved of greater value than have the soda salts, and in a few exceptional cases I have had success, where other remedies have failed, by giving dilute nitric acid in doses of from ten to forty drops, largely diluted in water, half an hour after meals, followed by chlorate of potassa in doses of from ten to thirty grains an hour after the taking of the acid. The action of these remedies, which combined as I have indicated is sometimes

strikingly beneficial, is probably by means of the oxygen which they supply to the blood and tissues, as shown in one particular by the notable decrease which takes place in the quantity of uric acid found in the urine.

The same general treatment, with care as to diet, exercise and fresh air is necessary for the plethoric state, as a remedy (of course, in part,) for the pruritus which may coexist with it. In this condition, the symptom pruritus generally involves large surfaces of skin ; and in my experience, more particularly the flexor aspect of the limbs than the trunk, though sometimes, even not infrequently, it is limited to the genitalia and anus. Diabetes, as a cause of pruritus, is frequent and is difficult to treat. I know of no work or monograph which considers as fully as the importance of the subject merits, of the pruritus which is secondary to preexisting lesions of the skin, and I shall not here have the opportunity of supplying the want. In cases of children afflicted with oft recurring urticaria, a pruritus may be developed, which will render their future life miserable ; hence the importance of carefully seeking the cause and of removing it. In such subjects every external source of irritation must be removed, and especial care must be paid for a long period to the condition of the skin. In like manner we must be on our guard in cases of chronic urticaria in the adult. The same care must be paid to avoid irritation and to allay any pruritus which may follow the exanthemata, which it not infrequently does, though enough stress is not laid upon it by authors. Woolens must not be worn next to the skin, and any and every source of irritation must be avoided. In these cases, though the patients be young, errors of suboxidation may be found to complicate the pruritus, and they should be treated in the same manner and as actively as in the adult.

I once convinced myself that a severe and general pruritus in a child, recently convalescent of scarlatina, was due to the preexisting irritation of the skin by the exanthemata, aggravated by the impaired function of the kidneys, secondary to the same cause, and an appropriate treatment brought relief and cure. When I speak, further on, of the local measures necessary for the relief of pruritus, I shall mention that treatment which is curative for the pruritus which sometimes follows measles which involves much space, and is often intense in character. The pruritus which is observed in eczematous patients, in spots which have been the seat of that trouble, and also in parts never thus affected, requires especial attention. If all traces of the eczema are not removed, such as thickening and scaling, proper treatment must be continued until the

parts appear normal. The general hygiene of the skin is in this condition especially necessary, and such underlying and often predisposing conditions as suboxidation, the rheumatic and gouty vice, malaria and plethora must be carefully sought for, and if found, sedulously treated. The pruritus which sometimes follows scabies is sometimes very distressing, and leads to the improper use of too stimulating applications. It is the duty of the physician to determine whether the itch insect has ceased to be the source of trouble, and to use such general, local, and if necessary, as is sometimes the case, internal measures as will bring relief. I cannot insist too strongly on this point, as I bear vividly in mind the cases of a refined man and woman, husband and wife, who accidentally contracted scabies, which was soon cured, and followed by a general and most intense pruritus, chiefly due to the severity of the applications which they continued to use long after the exciting cause had ceased. This point is of importance to be remembered, not only in the treatment of scabies, but also in some cases of eczema and psoriasis; indeed, we cannot, I think, exercise too much judgment and caution in the use of stimulating applications to the skin. The pruritus of the anus, scrotum, vulva, genito-femoral angle are largely caused by the coaptation of the parts and by the moisture peculiar to them, but also other conditions may be in operation, such as I have already pointed out, and as part of the treatment remedies must be addressed to their removal. I shall now only mention again, gout, visceral disease, the condition of suboxidation and diabetes. While these secondary causes are important, remedies addressed to their removal alone are not curative, and it is to these local spots of pruritus that topical remedies are most necessary and useful. The pruritus of old persons is often unattended with any deviation from health, which is recognizable, and hence is a condition difficult to treat intelligently, other than by topical means. In some cases we find a well marked atrophy of the skin. This tissue is then pale, thin, rather harsh and slightly scaly, and is the seat to a greater or less extent of itching, which is often very severe, particularly at night. This feature of nocturnal exacerbation is not peculiar to any form of pruritus, either accompanied or not by any lesion of the skin. In old persons, however, the rule is that the suffering is very severe and much worse at night than in the day time. As very little can be done, in the matter of internal treatment, for the winter pruritus or pruritus hiemalis, I shall say nothing of it here and only allude to it incidentally a little later on, when speaking of external treatment.

Such, then, is a brief review of the indications for internal treatment, and for the prophylaxis of that distressing functional affection of the skin, which, I repeat, we do not consider as a distinct disease, but rather a disorder. Let us now rapidly study the topical treatment which has proved most useful in the various forms of pruritus. Of course, the mode of our applications varies very much according as the itching is extensive or limited in its distribution, and according to the conformation of the parts. Where the trunk and extremities are involved, baths are of great benefit, not only for their direct, sedative effect upon the nerves of the skin, but also from their similar influence on the large nervous centres and the circulation. Warm water of various degrees is a direct sedative to the skin, and a further soothing influence may be gained by the addition of the mucilaginous portions of bran or of starch. To this, also, alkalies sal soda or borax may be often added with benefit.

Attention must be paid to the sensations of the patient, and also that when his flesh is dried it is not roughly rubbed, but rather carefully dried by slight pressure of the towel, which must be soft. I have known instances in which proper care not being used in administering the bath for pruritus, the reaction was so excessive that the sufferings of the patient were increased. As a sedative to the skin, applicable by means of a general bath, I know of no agent as good or certainly none better than the sulphuret of potassa, the only contra-indication to which is, its bad odor. Two to four ounces of this salt with one or two pounds of borax or sal soda, dissolved in thirty gallons of water, will form a bath suitable for severe and extensive cases of pruritus. This must be repeated generally at night, every day or every second day. It is always, in my judgment, well for the patient to lie down and rest, with moderate covering over him, after a bath, as exercise afterwards is followed by an aggravation of the symptoms. My practice is, that after the bath, the skin shall be well anointed, and I have used and can recommend, the following remedies :

R

Glycerin.,	-	-	-	-	-	ʒ iv.
Acid. carbol.,	-	-	-	-	-	ʒ i.
Ext. bellad.,	-	-	-	-	-	gr. xx.
Aq.,	-	-	-	-	-	ʒ ss.

M.

This must be well but carefully rubbed in the skin until it has a soft, unctuous feel. Then again, equal parts of vaseline and glycerine with one drachm of carbolic acid to each four ounces of the ointment is some-

times productive of great relief. Indeed, I think, that oftentimes the simple inunction of a pure oil, such as almond or olive oil, until the skin is quite greasy, is all that will be required after the bath. Not only should this inunction be used once daily after the bath, but also several times during the day, taking care that too much friction is not used. In the pruritus of old persons, especially with atrophic skin, this treatment is valuable, and is further beneficial in nearly all cases of extensive development. Some difficulty is always experienced in cases of extensive trouble in adapting the remedy, and in its application; but it can be overcome by patience and care. In the pruritus of old persons, also in that following pediculi, and again in public practice in general, I have used largely and generally with marked benefit, so that it has become to me a standard formula, the following preparation of carbolic acid, which drug I have come to regard as one of the most valuable agents for allaying cutaneous hyperaesthesia, which we possess:

<i>Rx</i>				
Acid. carbol,	-	-	-	ʒ ii to ʒ iv.
Glycerin.	-	-	-	ʒ ii.
Aq.,	-	-	-	ʒ vi.

M.

This is to be carefully sopped on the itching surface, until it is quite soft and unctuous. Again, there are cases in which fatty matters are useful, combined with carbolic acid. Such prescriptions as follow have proved more or less efficacious in my hands:

<i>Rx</i>				
Vaseline,	-	-	-	-
Ung. simplicis,	-	-	-	aa. ʒ ii.
Acid. carbol.,	-	-	-	ʒ iss.

M.

This must be well, but gently, rubbed in. Then again, I have derived benefit from a mixture of equal parts of vaseline and glycerine; indeed, it is sometimes wonderful how much relief is obtained by these simple fatty inunctions. I should especially recommend that you bear them in mind to be used alone or following the bath, either plain or medicated.

I may further add that I have reason to regard the sulphuret of potassa as an agent worthy of trial in the form of a lotion, and would suggest the following prescription:

R

Sulphuret potassae,	-	-	-	ʒ iii
Spts. camphor,	-	-	-	ʒ ss.
Glycerin.,	-	-	-	ʒ i
Aq. q.s. ad.	-	-	-	ʒ vi

M.

This may be gently applied to the itching surface and perhaps kept in coaptation by means of layers of lint saturated with it. The next important agent, indeed one of our most valuable for the relief of itching in almost any form, is tar and its preparations. For large surfaces in those cases in which ointments may be for any reason not useful, we can apply it as a lotion by using the French liquid called Goudron de Guyot, diluted with water, to which, according to my preference, about one eight part of glycerine has been added.

This Goudron de Guyot is an alkaline solution of tar, readily miscible with water, without turbidity. I have used it as strong as one ounce to seven of glycerine and water, and even as strong as two ounces to the same quantity. This makes an admirable lotion, which can be freely and continuously applied to the parts. For severe cases it is necessary to repeat the application several times daily, and to supplement its use by that of the bath. If applied without glycerine, the skin becomes after a time, hard and tense, and the sufferings are increased. I always, when using this or any preparation of tar for a length of time, advise one or two inunctions with one of the oily mixtures already spoken of. Another very excellent preparation of tar, which possesses the great advantage of mixing with water in any quantity, is called by its inventor, Dr. Bulkley, liquor picis alkalinus. Being more concentrated and more alkaline than the French preparation, it is to be preferred in general. Its formula is :

R

Picis liquidae,	-	-	-	-	ʒ ii.
Potassæ causticae,	-	-	-	-	ʒ i.
Aq. destillat,	-	-	-	-	ʒ v.

M., and strain.

This must certainly, in pruritus, always be diluted, and I have used it in proportions of from two drachms to half an ounce to eight ounces of water. As an anti-pruritic of tar and potash, it is, to my mind, very valuable, and can be relied upon in a vast number of cases to relieve this distressing symptom. Its ready miscibility is also a great desideratum. This lotion, also mixed with glycerine, may be used on

large and small surfaces, in combination with baths and inunctions, as the case requires. Further than this preparation of tar we have oil of tar, oil of cade, and oil of white birch or *oleum betulla alba* or oil *Rusci*. These can only be used in the form of ointment or mixed with glycerine and vaseline. The proportion most useful in my experience is one drachm of tarry oil to the ounce of fatty substance. The fatty substance may vary; thus you will sometimes find it advantageous to use the ointment of ozide of zinc, also an ointment composed of precipitated chalk, one drachm; simple cerate, one ounce; or you may order the sub-nitrate of bismuth instead of the chalk. This combination mixed with one of the tarry oils in the proportion mentioned, will, sometimes, indeed often, be of great service, not only in pruritus, but in cases in which this symptom is present with a well marked affection of the skin. Experience has shown that camphor possesses antipruritic powers of no light order. It may be variously used. In certain simple cases of itching, the ordinary camphor water answers a good purpose, particularly in children. It may be used as an ointment in the proportion of from one half to one drachm to the ounce, or it may be added to either of the above mentioned tarry ointments. The spirits of camphor in a mixture such as follows, is often of great value:

R.

Spts. camph.,	-	-	-	-	-	ʒ ss.
Boracis,	-	-	-	-	-	ʒ ii.
Aq.,	-	-	-	-	-	ʒ vi.
Glycerip.	-	-	-	-	-	ʒ ii.

M.

Care must always be taken that the mixture is well shaken. Though not extensively used iodoform has proved to be an antipruritic of some value. It may be used as an ointment in the proportion of one drachm to the ounce; and also as a lotion, which by the way, has been of marked benefit in my hands in pruritus of the vulva and of the anus. The formula is:

R.

Iodoform,	-	-	-	-	-	ʒ i.
Ether. sulphuric,	-	-	-	-	-	ʒ ii.
Glycerin.	-	-	-	-	-	ʒ i.

M.

The iodoform must be finely powdered. The parts are to be well moistened with this lotion and then covered with a layer of lint, wet in cold water. Perhaps, in certain cases of extensive pruritus, this lotion

may prove of equal value. I need not enter fully into a further consideration of this agent. Within a few years, a combination of camphor and chloral has been much used, and with benefit, as an antipruritic. The preparation is formed by the addition of about an equal amount of chloral to a given quantity of finely powdered camphor ; the result is a syrupy liquid of pungent smell and taste, which, undiluted, has proved of great benefit in severe neuralgia, and even in certain extreme cases of pruritus. As a rule, it is well to use it in the proportion of from one to three drachms to the ounce of glycerine, vaseline, or cold cream, and then gently rubbed several times a day upon the itchy parts. It can also be diluted with water and glycerine, and then forms a most valuable antipruritic lotion, as follows :

R						
Chloral camphor,	-	-	-	-	ʒ ss.	
Glycerin.	-	-	-	-	ʒ iss.	
Aq.	-	-	-	-	ʒ vi.	

M.

This may be applied to the parts, and also on lint. Then we must bear in mind the ethers, namely ; sulphuric ether, chloric ether and chloroform, as they sometimes succeed where other agents fail. They may be used either in the form of ointment or of lotion, which may be made best of glycerine and water. These agents are sometimes of benefit, in a dilute state, in pruritus vulvae and ani. Let us not fail to mention the dilute hydrocyanic acid in a solution of borax or combined with camphor, as an excellent remedy for certain mild forms of pruritus :

R						
Acid hydrocyanic dil,	-	-	-	-	ʒ ss. to ʒ i.	
Spts. camphor,	-	-	-	-	ʒ ii. to ʒ ss.	
Glycerin.	-	-	-	-	ʒ i.	
Aq.,	-	-	-	-	ʒ iii.	

M.

Sub-nitrate of bismuth or calamine, or precipitated chalk, in the proportion of two drachms to the four ounces of the foregoing mixture, may often be added with benefit. Then again cyanide of potassium may be useful, in cases of limited extent, used with caution and generally not stronger than one drachm to four ounces of water. In cases of limited extent the old black wash is often very beneficial, and it has in my experience often cured severe instances of intertrigo. It is well in a condi-

tion which we treat to some extent empirically to bear in mind all remedies which have done good, so I shall not fail to mention vinegar, a domestic remedy of some repute, used pure or diluted, or the fluid extract of hammamelis or witch hazel, which I believe, being introduced by our homœopathic brethren, has become a household remedy and is especially well thought of by the laity for itching of the skin and for burns and scalds. Pure water also may prove useful. I have had in some cases of extensive, and in many of limited pruritus, marked results from the following prescription, which relieved when camphor and tarry preparations aggravated.

JR

Fol. belladonnae,	-	-	-
Fol. hyosciami,	-	-	-
Fol. aconiti,	-	-	-
Acid acetic,	-	-	-

11

The leaves must be reduced to a tolerably fine powder and then mixed with the acid and allowed to macerate two weeks. When ready it forms a heavy dark colored liquid of pungent smell. Of this, two fluid drachms to the gill of water makes a very efficacious anti-pruritic, and a greater strength even may be used. I have sometimes seen the power of this lotion increased by the addition of two drachms more of acetic acid. In some severe cases of pruritus vulvæ and ani I have seen relief obtained by painting the parts, previously well washed, with a mixture of equal parts of this combination and glycerine. This may be done twice a day, and in the meantime an ointment composed of one drachm of the same combination and one ounce of simple cerate may be applied on lint. I shall merely mention, to render my list as complete as possible, the extracts of belladonna and of aconite, tincture of aconite, aconitine and veratrine, the directions for the use of which in various forms are given in the text books. In the same class we have the preparations of opium, of which I sometimes use morphine in solution, at others a solution of the watery extract of opium. These agents however rarely answer well alone, but are useful at times as adjuvants. It may appear unnecessary, but my faith in its effects prompts me to mention particularly, the old lead and opium wash, which modified as follows, is oftentimes of service as a cutaneous application :

R

Tr. opii,	- - - - -	ʒ i.
Spts. camphor,	- - - - -	ʒ ss.
Liq. plumbi subacet,	- - - - -	ʒ i.
Glycerniæ,	- - - - -	ʒ iss.
Aq. q. s. ad.,	- - - - -	ʒ vii.

M.

To be applied continuously on lint. If to this we add half an ounce of the subnitrate of bismuth we have one of the most reliable and efficacious lotions for that common affection of hot weather, prickly heat, which I have ever used, and I speak feelingly. It may be well to mention general tan-baths as being indicated in some cases, and the infusion of quassia as a lotion well spoken of by some writers.

I have been struck with the great relief often produced by preparations of the oils of peppermint or spearmint. They often relieve itching instantly and induce a delightful sensation of coolness. It is not well to use the oils in a pure state but rather the essences variously diluted with water. In severe cases equal parts of essences of peppermint and glycerine are very efficacious painted on the parts with a camel's hair pencil. The oils may be used in the form of ointment in the proportion of from half to one drachm to the ounce of simple cerate.

There are several anti-pruritic powders which are sometimes indispensable. The most important is that which is commonly called Anderson's powder. It is formed as follows :

R

Pulv. amyli,	- - - - -	ʒ i.
Pulv. camph.,	- - - - -	ʒ iss.
Zinci oxd.,	- - - - -	ʒ ss.

M.

This must be carefully made, the camphor being reduced to an impalpable powder and then thoroughly incorporated with the other ingredients. It may be either lightly dusted upon the parts, or it may be quite copiously rubbed into the meshes of linen lint and then applied. The proportions may be altered either by increase or diminution. Then there are rice powders, lycopodium, subnitrate of bismuth, calamine, and prepared chalk.

It now remains for me to treat briefly of the pruritus of the vulva and of the anus. Space will not admit of a consideration here of the necessities for treatment of the parts in anatomical connection with these

regions, and such is unnecessary as the subject of pruritus vulvae is treated of in the most thorough and graphic manner in Dr. Thomas' classical work on diseases of women ; and as all surgeons in their work speak of the rectal affections often coexistant with pruritus ani. To begin with the pruritus of the vulvae, injections into the vulvae are generally indispensable. Infusion of tobacco injected very warm and copiously, is spoken of by many, and Dr. Butt of Alabama recently stated that he derived benefit, where all other remedies had failed, by using a hot tar tansy poultice. Copious injections of hot water followed by the application of linen cloths, wrung out in hot water, are also worthy of mention, while we have the authority of Dr. Gill, of St. Louis, for the use of nitrate of alumina, five to ten grains to the ounce of water, as a vaginal injection. In my own practice I have seen marked benefit from the use alternately of very hot and very cold water, followed by the continuous application of lead and opium wash. Alkaline injections, of course very hot, made by adding either sal soda or borax, are of frequent service, and very dilute solutions of Goulard's extract are excellent as vaginal injections. It may be necessary in some of these cases to tampon the vagina, as such has been known to do good ; in any case, I think it is absolutely necessary to keep the lips of the vulvae separated by means of a folded piece of soft linen or of linen lint. Of course, any secretion from above must be traced to its origin and looked after ; the urine must be carefully examined and the condition of the rectum noted. Any abnormality requires treatment as imperatively as does the vulval symptom. I shall here merely allude to the various remedies already considered and mention a few which are particularly applicable. First, let me say, that in many cases of vulval pruritus, ointments and fatty preparations are harmful, and that generally aqueous ones and liquids do good. The solution of cyanide of potassium, or the hydrocyanic acid combination have been used with success, as has also the lead and opium wash, with or without camphor and black wash. Dr. Thomas gives the following very useful formula, the chief agent of which is corrosive sublimate, which as a solution with various adjuncts has been extensively used as an anti-pruritic :

R.	Hyd. bichloridi	-	-	-	-	-	3 ss.
	Tr. opii	-	-	-	-	-	3 ss.
	Aquae	-	-	-	-	-	3 vii.
M.							

This should be sopped on the parts freely and then kept continuously

applied on lint. I have used this salt in various forms for pruritus, and have come to regard it as of benefit quite frequently. It must always be used cautiously, especially on a surface of some size. Solutions of nitrate of silver deserve especial mention, applied in various strengths, sometimes particularly in old cases with much thickening of the mucous membrane as strong as from one half, to a drachm and a half, to the ounce of water. The parts are to be painted carefully and then kept apart by lint soaked in water or any lotion used rather less frequently. But still of great value if judiciously and well applied are solutions of caustic potassa and soda of strengths similar to those of the nitrate of silver.

These are generally indicated in old cases with much mucous membrane hypertrophy. When this latter condition exists, it is fair to say that the itching will continue as long as it is not especially treated, and that the symptoms will generally be relieved in proportion as the thickening grows less.

Suppositories either rectal or vaginal may be remembered, for which we have numberless ingredients, some of which I have mentioned. My friend Dr. F. Leroy Satterlee has used with more than ordinary benefit as a local application by means of a brush, the fluid extract of conium. This drug is to my mind capable of extensive application either in the form of an infusion used after the manner of the tobacco preparation, of an ointment made of the solid extract, or in the form of the fluid extract of which Dr. Satterlee speaks so confidently. It occurs to me that perhaps the preparation of which I have already given the formula, being composed of acetic acid, belladonna, leaves, et cet., may be rendered more efficacious by the addition of conium. Certainly this narcotic vinegar can be used with good results in valval pruritus, both largely diluted as a vaginal injection and of greater strength for continuous application. As a curiosity I may mention the astonishing cure of an aggravated case of pruritus valvae, occurring during pregnancy, in which upon two occasions instantaneous and prolonged relief followed the smoking of a cigar. The full details of the case are to be found in Dr. Thomas' work. I need not mention all of the various ointments which have been used and found to be of more or less ephemeral effect, except to say, that it is sometimes well to try certain of those in which a mercurial salt is an ingredient, notably diluted citrine ointment, and a mild calomel ointment. It is well, also, to remember prominently carbolic acid and iodoform as being often useful. As a rule, tarry applications are harmful, but the chloral camphor combination, diluted, has been known to do good. Much relief, if even temporary,

may be produced by spraying the parts, for which purpose a slightly stimulating and anodyne solution is indicated. This procedure may be used also in cases of pruritus ani, and the idea suggests itself that to spray many large itching surfaces with other preparations may also be worthy of a trial. I have not thus far mentioned iodine, as its use is restricted to small spots, and it may be used in the cases under consideration in various forms. The older writers speak well of yellow wash, therefore it is well to place it in our repertorium. Many of the remedies useful in pruritus of the vulva are also of service in itching of the anus. In treating this distressing symptom not only must the general condition of the patient be looked after, but care must be taken to ascertain the state of the rectum and parts surrounding. Any lesion of the anus and rectum must be especially treated. The various lotions, ointments, and applications previously spoken of may be tried. I may mention as deserving of praise the salve called by Bryant *unguentum metallorum*, composed of equal parts of ozide of zinc ointment, citrine ointment, and lead ointment. Tarry applications may be of benefit, especially if combined with powdered nutgalls. Injections into the rectum, simple or medicated, may also give relief, while for occasional use suppositories may be borne in mind. Much benefit often follows the application to the anus of a sponge wrung out in very cold water. I may also especially mention iodoform and carbolic acid, which singly or combined form a valuable application if incorporated with the officinal lead ointment in varying strength, as the cases suggest. Many more formulae might be given, but I think that if some of those already enumerated are judiciously used, relief will be obtained.

42 WEST 21ST STREET, NEW YORK.

THE EVIL RESULTS LIABLE TO FOLLOW THE USE OF
ESMARCH'S ELASTIC BANDAGE.

BY

JOHN B. ROBERTS, M. D., of Philadelphia.

When the bloodless method of operating, proposed by Esmarch, was first introduced to professional notice, in 1873, it was received very cautiously, and articles were written setting forth its dangers and disadvantages. Soon, however, its evident merit gave rise to a more than compensatory reaction. The journals were filled with laudatory accounts of its adoption in single cases; all kinds, and indeed, the most trifling operations were performed by the bloodless method; numerous modifi-

cations and so called improvements of Esmarch's simple and effective band and tubing were proposed ; and a drop of blood assumed such physiological importance that not only did the time-honored treatment of certain affections by venesection seem to be in jeopardy, but one almost expected to hear that phlebotomy itself had been rendered a bloodless procedure.

Gradually, as the novelty decreased, this turmoil subsided, and the elastic bandage is now in daily use, occupying the position of a valuable assistant in certain operations, while in others it is considered useless or indeed harmful.

Now that sufficient time has elapsed to allow a faithful trial of the bloodless method, and to enable surgeons to profit by experience in employing the india rubber bandage, it may be well to see if any evil results can be fairly attributed to it as a causative agent. There have been frequent assertions made that the Esmarch's bandage is liable to be followed by various unfortunate and even disastrous results ; and cases are from time to time reported where this certainly seems to have been the fact. These disadvantages, if I may so call them, may be arranged under a half dozen different heads: I. Hemorrhage taking place immediately after removing the constriction, or at a period sufficiently late to be called secondary bleeding. II. Paralysis of the nerve trunks of the extremity. III. Greater tendency of the flaps, made in amputations, to slough. IV. General gangrene of the limb. V. Thrombosis and subsequent embolism. VI. Pyemia, by forcing septic matters towards the centre, when the bandage is used in patients suffering from suppurative affections.

I. In 1874, at Berlin, Esmarch himself admitted that obstinate capillary bleeding may follow the removal of the bandage,* which is supposed to be due to the pressure causing a paralysis of the vaso-motor nerves, and therefore a subsequent dilation of the capillaries. This fact has been noticed by many, and must therefore be admitted. Verneuil, Bruns, Nicaise, Spence, Chiene, have all called attention to this circumstance,† and many instances have also been cited.

At the Leicester infirmary, in a case of excision of the knee, where the elastic bandage was used, the subsequent hemorrhage was so great that amputation of the thigh was performed on the following day. In a case of amputation of the leg, at the same hospital, the reactionary

* *Med. Times & Gazette*, May 1874, p. 591.

† *N. Y. Med. Jour.*, 1876, p. 546 ; and *Deutsche Zeitschrift fur Chir*, VII, p. 463.

hemorrhage occurring a few hours after operation was sufficient to be ultimately the cause of death.* A somewhat similar instance is recorded, where Sedgwick amputated a forearm, and was annoyed with troublesome venous and capillary oozing for three or four hours before he could close the stump. Two days later this oozing had continued to such an extent that it became necessary to open the wound, cleanse it and apply a styptic. Then the stump progressed favorably.†

These three cases occurred soon after the introduction of the bloodless method, and may therefore be accepted with a certain amount of hesitation, since at that time operators may have placed too much confidence in the artificial anaemia, and have neglected to ligate the smaller arteries. Rather more positive, however, is the following evidence :

Drutrait, of Lyons, thinks that hemorrhage occurring within three to six hours is more frequent after using Esmarch's apparatus, than when the ordinary method is adopted ; and gives notes of twenty-eight major operations performed with the assistance of the bandage, where loss of blood took place in eighteen instances, and in two-thirds of these it was severe enough to require some form of intervention.‡ Riedinger refers to a patient operated on by Linhart for irritable stumps, following double amputation above the malleoli for frost bite, where secondary amputation was resorted to in each instance ; but on the right limb the elastic bandage was applied, while digital compression was adopted when the left stump was removed. The blood lost during and after the operation, before the flaps were approximated, was carefully weighed, and found to be $2\frac{1}{2}$ oz. in the case of the right, and $1\frac{1}{2}$ oz. in that of the left.|| In regard to the amount of blood lost to the system, however, he says : this is not absolutely correct, for in the small stump removed from the left leg there was a very small amount of blood that was not returned to the trunk, by the mere elevation and rubbing employed before digital compression was begun. This could not have been much, however, for the stumps contained but a small amount of blood, and according to Bruns, about thirty per cent. of the blood in an extremity remains after the elastic constriction has been thoroughly applied.¶

**Lancet*, July, 1874, p. 71.

†*British Med. Jour.*, April, 1874, p. 442.

‡*Med. Times & Gazette*, March, 1875, p. 321.

||*Deutsche Zeitschrift fur Chirur.*, VII, p. 466.

¶*Virchow's Archives*, LXVI, p. 383, 1876.

Esmarch, who, as stated above, admits the existence of this capillary oozing after relaxation of the constricting tube, thinks it can be diminished by not having so much pressure exerted by the tubing, or by even using the elastic bandage alone as a tourniquet. He also advises the use of many small forceps to control the smaller vessels, and in many cases plugs the wound with carbolized charpie, or the like, before loosening the constricting apparatus. *Riedinger thinks that by applying the poles of a battery to the flaps, he "restores the abnormally increased lumina of these vessels (capillaries) to their former condition," and thus diminishes the bleeding.† From what I have seen of cases where the bloodless method has been adopted, I cannot think that true secondary hemorrhage is at all likely to occur as a result of the constriction exerted by the bandage, if the same care be taken to secure the smaller arteries, as is almost invariably done under the old tourniquet system; while pressure properly applied is usually sufficient to control the oozing which occurs from the capillaries.

II. Paralysis of the muscles of the extremity resulting from the pressure on the nerve trunks has certainly occurred. Langenbeck had this sequela follow in four cases, where he had operated on the upper extremity. Two of the patients, who had been subjected to operation for the relief of pseudarthrosis of the humerus, presented paralysis of the median nerve for two weeks; and two other cases still showed a similar palsy at the end of four weeks, when they became lost to the observation of the operator. Verneuil, Weir of New York, and Cartaz have each had a similar lesion, subsequent to the use of the elastic bandage;‡ the case of Cartaz, however, was of but seven days duration, and also followed an operation on the humerus. In fact, I have seen no case of paralysis of lower extremity mentioned: perhaps, because the nerves of the arm are more easily compressed against bone on account of the smaller amount of muscular and fatty tissue. Dr. Sands refers § to a case where neuralgic pains existed for two weeks after a bloodless operation for necrosis of the scapula.

The solid rubber cord was used as a constrictor in some of these instances at least; but as there has been a tendency of late to use a tube

* *N. Y. Med. Record*, March 3, 1877, p. 135.

† *Deutsche Zeitschrift fur Chirur.* VII. p. 484.

‡ *Archives Generales de Med.*, XXVI, p. 165, and *Deutsche Zeit. fur Chirur.* VII, p. 479.

§ *N. Y. Med. Jour.*, Jan., 1875, p. 18.

or flat band instead of the cord, and as experience has shown that powerful constriction is not required, these cases of traumatic paralysis will doubtless become much less frequent.

III. Sloughing of flaps in amputation has been ascribed to the agency of the Esmarch bandage, but when it is recollect how frequent an occurrence this is under the old method, and especially in traumatic surgery where flaps are necessarily made from contused and lacerated tissue, it is seen how unreliable such assertions are unless supported by most exhaustive and elaborate statistics.

A case is mentioned by Dr. H. B. Sands, of New York,* which may be referable to this division of our subject. A patient, feeble to be sure, was subjected to amputation of the thigh for cancerous disease. The elastic bandage was employed and the operation done in the orthodox manner, but both of the flaps, which as the case was one of chronic disease may be considered to have been made of sound tissue, sloughed, and death of the patient took place.

IV. General and extensive gangrene of the limbs is one step farther in this direction, and may well be considered in connection with sloughing of flaps. Cases of this kind have been reported from various hospitals, and it may be well to give an account of the several instances. In the Brooklyn City Hospital, a man, aged 28 years, was treated for necrosis of the carpus by partial excision of the joint. The elastic bandage was applied as usual. Two days subsequently phlegmonous inflammation and gangrene occurred to such an extent, that amputation was resorted to; but in this operation, digital compression was employed instead of the bandage, after which the stumps healed almost by first intention.† Here then was a chronic disease, for which excision was performed by Esmarch's method, and sloughing occurred, while the subsequent amputation did well, though the patient's condition was probably more unfavorable than at the time the bloodless method was adopted. The attendant, Dr. Speir, justly attributes, I think, the unfortunate result of the first operation to the use of the elastic bandage, which, as he suggests, may have been too tightly applied. Here is another somewhat similar case, reported by Dr. J. H. Pooley,‡ who resected the head of the first metatarsal bone for deformity and caries, in the person of an old man, 75 years of age, but in perfect health. The day after the

* *N. Y. Med. Jour.*, Jan. 1875, p. 15.

† *N. Y. Medical Jour.*, Jan., 1875, p. 16.

‡ *N. Y. Med. Record*, 1875, p. 372.

operation, gangrene supervened, and spread up the foot and leg nearly to the knee, when death occurred. It would be interesting in these cases to know what relation the extension of sphacelation had to the line of constriction, though when the sloughing process once begins, it may readily extend, I suppose, above the level of the tubing. Still another case was mentioned before the Illinois State Medical Society, by Dr. J. L. White,* in which a young man, healthy, but not very vigorous, underwent an operation for ankylosis of the knee, which was done by the bloodless method. The cord was applied high up on the thigh. The patient's condition was good for a day and a half, when gangrene invaded the leg, below the knee. When amputation was undertaken, it was found that all the connective tissue below the point of application of the cord was in a condition of incipient gangrene, so that the limb had to be removed near the hip-joint; death took place in one day.

The report does not state the form of operation done for the relief of the ankylosed condition of the knee.

Another case under the care of Humphrey, of Cambridge, but not attributed by him to the Esmarch's bandage used, seems to me to be an instance in which, to say the least, the elastic constriction ought to be suspected. The patient had received a railroad crush of the right foot, for which a Pirogoff amputation was done, and a worse crush of the left leg and thigh, necessitating amputation at the middle third. Death took place on the third day, at which time the left stump showed signs of sloughing, with crepitation of infiltrated gas up to the abdomen. The data in this case are not very fully reported, and it may be that there was severe contusion of the upper thigh and hip to account for the spreading gangrene.†

The following case ‡ does not appear to me to be justly attributed to the Esmarch bandage, though Mr. Bryant's opinion is certainly worthy of the greatest deference.

A man, aged 47, was admitted to Guy's Hospital with popliteal aneurism, for which the elastic apparatus was applied above and below the knee, leaving the tumor exposed; it was removed after three hours had elapsed. At the end of three days the same treatment was attempted, but on account of pain was discontinued. After the lapse of ten days, the aneurism showed no signs of improvement, and the femoral artery

* *N. Y. Med. Record*, May, 1877, p. 325.

† *Lancet*, Nov., 1873, p. 747.

‡ *Med. & Sur. Reporter*, May 26, 1877, p. 474.

was accordingly ligated. Union of the wound by first intention took place, but gangrene of the foot set in, and amputation of the leg was performed after the line of demarcation had formed just above the ankle. Mr. Bryant was inclined to attribute the occurrence of gangrene to the application of the Esmarch apparatus ; but, surely, this decision is erroneous. The complication occurred after the femoral artery had been tied (which operation was not performed until *ten days* after the use of the elastic bandage had been discontinued), and mortification might readily occur after the vascular supply was thus interfered with by ligation. Moreover, it is well known, that gangrene of the extremity is not an unusual sequel of aneurisms of large vessels.

This last case may be doubtful, but the others seem to show that caution must be displayed in using the apparatus for bloodless operations. Prof. Esmarch said, in 1874, that he had operated upon three hundred cases,* and had seen no evil results follow the use of constriction by the elastic apparatus ; but, perhaps, he may have had some unfavorable cases since, which I have not seen recorded ; and at any rate his experience in applying the bandage would contribute to his success.

In regard to the length of time the constriction may be continued, Dr. Sands says,† that in several of the cases tabulated, the apparatus was kept on the limb for an hour, and in an amputation of the thigh, during an hour and forty minutes, without injurious consequences. Esmarch mentioned before the London Clinical Society, an instance in which he and an assistant operated at the same time on the two tibiae for necrosis, and maintained pressure by the bandage for $2\frac{1}{2}$ hours without harm.

V. Among the earliest objections urged against the Esmarch bandage was the possible occurrence of thrombosis and embolism, after its application. Another objection, somewhat allied to this, was the fear that driving so much blood from the extremities might cause undue vascular tension, and, perhaps, rupture of cerebral or spinal capillaries. I have seen one case reported, bearing on the first objection, which occurred in the obstetric ward of Spaeth of Vienna. Subsequent to hemorrhage from placenta praevia, a woman's legs were bandaged to drive the blood to the trunk and nerve centres. After the bandage had been retained several hours, pain caused it to be relaxed, when the patient was immediately seized with precordial pain, respiratory distress and imperceptible pulse. The elastic bandage was reapplied, but death occurred in

* *Trans. London Clinical Society.* Vol. VIII.

† *N. Y. Med. Jour.*, Jan., 1875, p. 1.

two hours. The autopsy showed emboli 3 to 4 millimeters in thickness, obliterating several of the smaller branches of the pulmonary artery. The saphenous veins were varicose and contained similar clots, which had been formed by the blood remaining in the dilated veins when the bandage was applied. As the bandage was relaxed, the circulation was restored through these vessels and emboli washed into the lungs, which caused immediate collapse and subsequent death.*

The second objection mentioned above seems to be answered by the fact that direct transfusion of a larger proportional quantity of blood, or the ligation of a large artery like the common iliac causes very slight and transitory increase of tension. S. Von Basch has made some experiments on this subject by applying the bandage to the leg and measuring accurately the arm to detect any increase in volume. While the bandage was being applied the volume of the arm never increased, but a short time after the constriction of leg and thigh had been completed an increase did occur, due, he thinks, to pressure on the nerves of the thigh causing reflex contraction of the small arteries, and not to the blood forced out of the limb.†

VI. The last drawback to the bloodless method of operating which I proposed for discussion was the induction of pyaemia by forcing septic material into the system. In a recent number of this journal Dr. † Stephen Smith reported a case of fatal cellulitis and pyaemia following the use of the elastic bandage. A man, aged 25, was admitted to Bellevue Hospital for necrosis of the humerus, giving a history of acute periostitis attended with suppuration and the formation of sinuses. He was in excellent health. There appeared to be no purulent infiltration of the soft tissues, and consequently, the bandage was applied with equal firmness over the diseased portion of the arm. The operation was quickly done, and antiseptic applications employed; but next day local inflammation which went on to abscess, occurred just above the line of bandaging; and there was soon evidence of commencing cellulitis taking place from the abscess as a focus. The abscess on being opened gave vent to fetid pus. The inflammation spread rapidly over the shoulder, neck, and chest; the patient had high temperature and rapid pulse, and was attacked with pleurisy and dyspnoea, and local cellulitis of hip and leg. The next stages

* *N. Y. Med. Jour.*, 1876, p. 209.

† *Medizinische Jahrbücher*, 1877, I, p. 83; and *Dublin Journal of Med. Science*, June, 1877, p. 595,

† ARCHIVES OF CLINICAL SURGERY, May, 1877.

were prostration, irregular chills, clammy sweats, sallow skin, and all the symptoms of pyaemia. Death occurred on the twelfth day after the operation. The autopsy showed extension of the cellulitis from the primary abscess to the thorax. The pleura was covered with shreds of decomposing membrane, and the cavity contained seropurulent fluid. The lungs, brain and liver were not affected. This case, a single one though it be, shows the danger of using the Esmarch bandage indiscriminately in such conditions ; the pressure should be diminished on passing over the regions where there has been chronic suppuration, or should be warded off by a layer of cotton or charpie, or better still, the bandage should be omitted and the tubing used alone after the limb has been drained of blood as far as possible by elevation.

I have endeavored to discuss this matter of the evil results of the careless and unscientific use of the elastic bandage without bias ; and have given the records of such cases as I have been able to collect. There are, doubtless, many other instances where unfortunate results might be truthfully ascribed to too great or too prolonged pressure of the elastic apparatus, which have not been reported ; nay, perhaps, not even recognized, but attributed to the hospital infection, bad condition of the patient, etc. Great as undoubtedly is the invention of Esmarch, it must surely be employed with due circumspection, and be subjected to theoretical and clinical tests before its position on the surgeon's armamentarium is definitely fixed.

1118 ARCH STREET, PHILADELPHIA.

USES OF DRAINAGE TUBES IN SURGERY, WITH REPORT OF CASES.

BY

THOMAS A. ASHBY, M. D.

Resident Physician to the Maryland University Hospital, Baltimore, Md.

One of the greatest triumphs of modern Surgery has been the almost complete elimination of erysipelas, gangrene, septicæmia and pyæmia from hospital and private practice. This result has been attained largely by the antiseptic dressings for wounds and injuries as introduced by Lister, and in part to the new methods of cleanliness employed in surgical practice. From time to time, numerous advocates of special methods for dressing wounds come forward with preferences for their plans and urge their adoption by the profession.

It may be said in favor of these different methods that the object sought is in general the same, the difference only in manner of securing the one result, *cleanliness in dressing*.

Several years back, a novel method for cleansing abscesses and draining suppurating passages, was introduced, which consisted in the employment of rubber tubes of various dimensions, with small eyelet holes every half inch, through which pus might drain and fluids be injected. In a large hospital experience this method has proved most serviceable and satisfactory, and has entered largely into the treatment of many classes of wounds and operations which have come under my observation during the past two years.

The following cases will illustrate the mode of application and the results of treatment.

Mrs. S., aged 40, first observed a hard tumor in her right breast six months previous to her appearance for treatment. The tumor grew rapidly, accompanied by severe lancinating and stabbing pains. About the fifth month from date of first appearance the tumor had attained the size of a cocoanut, became soft, skin red and inflamed, and presented the appearance of a large abscess of the breast. She was advised by her physician to come to this hospital for treatment, and at the time of her admittance the skin directly over the tumor had ulcerated and ruptured, giving vent to a free discharge of pus and debris. Upon examination it was pronounced a cystic sarcoma, and the entire breast was at once amputated. Lines of incision were made around the tumor, at sufficient distance from the ulcerated skin to insure the entire removal of the morbid growth. After the removal of the mass and ligation of all

vessels, a rubber tube, 12 inches in length, with eyelet holes every half inch, as recommended previously, was placed in the floor of the wound, with ends protruding two inches at each end of the incision. The flaps were drawn over the tubing and attached with wire sutures. The entire extent of the incision, save at the margins occupied by the tubing, healed in one week's time by first intention.

The enclosed surface occupied by the tubing was washed morning and night with injection of carbolized water, and pus, as fast as it was made, in this manner removed.

The patient improved without bad symptoms, and in three weeks' time was discharged, cured.

As the discharge of pus became less and the surfaces united, the tubing was drawn gradually from the upper opening within the sac until its final removal from the lower. By this gradual withdrawal of the tube, the track occupied by it was sealed by union, and pus accumulation prevented.

Two other cases of scirrhous of the breast were treated in this manner, with the same good results.

The merit of this simple plan of treating operations about the breast consists in its cleanliness, freedom from formation of abscesses and burrowing of pus, in the speedy union of the flaps, without ugly cicatrization, and in the rapid cure of the patient. Unfortunately, it can only be applied in cases where sufficient flap remains to allow the margins to come together.

CASE II.—H. S., seaman, aged 21, was admitted into the hospital for a compound comminuted complicated fracture of the tibia and fibula at the ankle-joint. The injury was occasioned by the falling of a pile of lumber upon the limb.

The bones were broken in splinters, joint disorganized, and soft parts bruised and lacerated. The limb was so crushed and deformed that amputation was thought of. After careful consideration an attempt was made to save the foot by the use of rubber tubing, after the following method :

Two incisions were made in the soft parts, opposite to two which already existed from puncture of fractured ends of the tibia and fibula, through which tubing was passed. Through these tubes currents of carbolized water were passed morning and night, and the pus, as fast as it was formed, was washed away. In this manner perfect cleanliness was secured and extensive sloughing limited. As often as new points of pus formation were observed an incision was made into them and

tubing introduced.

The manner of treating the fracture was as follows :

The entire limb was suspended in Smith's exterior splint, and extension made on the limb by the position of the bandage around the heel, the broken fragments of bone having previously been adjusted and placed in the best possible condition for union. The extent of the injury was such that for several weeks amputation was daily considered, and only prevented by constant adjustments of the fracture and perfect cleanliness of the suppurating cavities, secured by the employment of drainage tubes. At the date of writing the patient is enabled to use his crutches, and walks through the wards of the hospital. The union of bone is complete, with considerable osseous deposit around and complete ankylosis of the joint. I believe in this instance the limb was saved by this method of treatment.

CASE III.—W. S., aged 25, seaman, was admitted into the hospital, with a large induration extending around the middle portion of the femur. It was diagnosed as a periostitis. Rest and local applications were employed for several weeks until, suddenly, symptoms of septicæmia supervened. The patient was anæsthetized, and a deep incision made into the bone. No pus escaped from this incision until a portion of the femur was chiseled away, when a free flow escaped from the medullary cavity. A drainage tube was introduced to the bottom of the wound, and daily washings of carbolized water employed. The patient improved greatly after this operation and was soon walking about the wards with the tube protruding from the wound.

The flow of pus ceasing the tube was withdrawn and opening allowed to close. Several weeks after the removal of the tube the patient again complained of pain in the limb, and exhibited symptoms of septicæmia the second time. A large abscess suddenly formed near the first incision, which was at once opened and discharged at least one pint of pus.

It was deemed advisable to operate upon the limb and remove the necrosed bone. An operation was accordingly performed, and a portion of the necrosed femur removed and a portion was left remaining, as the line between the dead and living bone was not established. The wound was treated as in the first instance, with drainage tube, which the patient continued to wear until the discharge of pus ceased and all trouble subsided. Six weeks after the second operation a piece of dead bone escaped from the wound. At this time the patient is comparatively well, and is enabled to do duty as ward master in the hospital.

I am informed by Professor L. McLane Tiffany, in whose service these

cases occurred, that he has used drainage tubes in private practice and at the City Alms House, with equally good results.

Drainage tubing has been employed in other cases of necrosed bone, in a manner similar to that referred to in case 3, with similar results. It is especially useful in keeping open the sinus leading to the necrosed bone, and by removing pus as it is formed prevents it from burrowing and forming abscesses in neighboring parts. After amputations it has been used as follows: The tubing, with the eyelet holes, is placed in the wound, with ends protruding one or two inches on each side. The flaps are brought together and unite by first intention. The enclosed pouch is kept clean by injections of water through the tubing until its cavity is nearly closed, then the tubing is withdrawn, and orifice allowed to heal.

The usual wash employed for injections in these cases consists of carbolic acid one part to fifteen or twenty parts of water. A good glass syringe is sufficient to inject the stream, as the nozzle easily fits the tubing.

The size of the tubing may vary from one-sixteenth to one-half inch in diameter, depending upon the character of the wound. I would recommend this mode of treating wounds as easy of application and good in its results.

TRANSLATIONS.

DRESSINGS FOR WOUNDS.

A series of five Clinical Lectures delivered at the Charity Hospital, Paris.

BY

L. GOSSELIN, M. D., Etc.,

Professor of Surgery in the Faculty of Medicine of Paris, Etc.

Translated from "*La France Medicale*" for the ARCHIVES OF CLINICAL SURGERY.

BY

BARNARD ELLIS, M. D.

(Continued from page 105.)

Among all these tentatives, was one by a surgeon of Bordeaux, but which was based upon data so far removed from ordinary dressings that but little attention was paid to it ; and besides, its author gave no explanation or theories upon which it was based.

Nevertheless, this method was really borrowed in great part by Lister, and formed, if not the basis, at least the most substantial point of Lister's dressing, so much extolled to-day.

SIXTH GROUP—DRESSING BY IMPERFECT OCCLUSION, WITH VOLUNTARY PRESERVATION OF A SMALL CAVITY AT THE BOTTOM OF THE WOUND.

It is thus I characterize this new method :

In 1874, Dr. Azam, professor of clinical surgery at Bordeaux, explained to the French Association, assembled in Lyons, a new method of reunion of amputating wounds, curing the patient as surely as the occlusive treatment of Dr. Alphonse Guérin, and more rapidly. It is, in fact, one of the objections to the wadding treatment, and which is rightly made, that we must wait for fifty or sixty days, and sometimes longer, for complete cure. Now, from the results furnished by Dr. Azam in 1874, cure is obtained in from ten to twenty-five days. There is, gentlemen, a great fact, worthy our best attention.

I will explain, briefly, the plan of Dr. Azam :

Amputation made and the wound prepared, he places, rather inferiorly, to the bone or bones, a flexible tube, bent upon itself, so that the two ends meet, and this is fixed upon the member. Then an assistant brings together the edges of the flap, and fixes them with two or three quilled silver sutures, about two inches above the line of section of the skin, to which is fixed in the usual way, a piece of a gum elastic sound.

This deep suture made, and approximation assured, Dr. Azam makes a

twisted suture, as carefully as he would make it on the face after an autoplastic operation, leaving at the extremities the smallest passage possible for the drain and the sutures. Over the whole he puts wadding and a loose bandage.

Now, gentlemen, here is what is eliminated from the study of this method.

1st. A superficial suture.

2d. The deep suture which is to hold in contact the surfaces of the cavity.

3d. A drainage tube reaching to the bottom of the cavity, and by which the blood and serosity runs out.

The superficial suture had been already used by the English surgeons to obtain immediate reunion.

I have already told you how this last method had gone out of use ; of its success in England ; the voyage which Roux made to London in 1814 ; the enthusiastic reception ; the veritable infatuation with which it was received among us, and practiced for more than twenty years, and finally, the complete disuetude into which it fell, because of its numerous failures, and much worse, the dreadful accidents which followed it.

As to the deep suture, it had been conceived by Dr. Langier ; and in 1853, at the Academy of Sciences, he proposed to reunite the muscles of an amputation wound from the circumference to the center of the stump, by means of two cork plates, which embrace nearly the circumference.

The free extremities of these plates are then brought together and held by twines crossing in each direction, and more or less of them tied. Langier did not obtain good results from this method, and it fell into disuse. Dr. Azam appropriated the original idea. But this deep suture cannot hold the soft parts perfectly in juxtaposition with the bone, and even if it could, it could not determine the union of parts so incongruous, so foreign, one to the other, as, from that moment the serous exudation would remain in the deep parts, and putrify, as in the English method. Dr. Azam, in view of these complications, conceived the idea of placing at the bottom of this large and anfractuous place, a drain, which would permit this serum and blood to run off. The air will penetrate into this cavity, but will find nothing there upon which to exercise its putrefaction.

I admit for the instant, with those who disparage the method of Dr. Azam, or who, at least, refuse to give him the priority, that other surgeons had used the drainage before he did, among them Dr. Fochier at

Lyons, Dr. Courty at Montpellier, and Dr. Broca at Paris, even as had been used for a long time—the superficial, and the deep sutures—but it is not the less true, that Dr. Azam has the credit of having united these different processes into one group, and formed a method of dressing, which, in my opinion, is entitled to the most respect.

And, gentlemen, the more so, as the results plead in his favor with an eloquence which we should not know how to deny.

The edges of the wound cicatrise by first intention, the deep parts reunite. A very moderate inflammation is developed in this little cavity, voluntarily left, and which I shall call, if you will, the *Chamber of the Bone*; a granulous membrane becomes established upon the surface of this cavity, and upon the surface of the bone, and unites them, after suppuration, it is true, but after suppuration limited to a very small surface, and free from grave accidents. It seems, in a word, that this makes the intermediary cicatrisation of which I spoke at the beginning of this lecture. All this is not mere illusion. The twenty-six cases, gathered and published by Dr. Azam, are proofs of it.

I admit that there were cases of death, but I repeat, what I have many times told you, that there is no exclusive method, and that in the successful cases, and they are by far the most numerous, cicatrisation is perfect from the 10th to the 25th day.

To what then are we to attribute the fate which befell this new method, the discredit into which it fell, or rather the ignorance of it, for so long a time in our country?

It is, that all methods, to be generally adopted, must be based on a physiological theory. Now, Dr. Azam contented himself with publishing results, and nothing more, not even using the words, reunion, and intermediate cicatrisation. This neglect of Dr. Azam, was sufficient to turn attention from his method, which on the other hand, did remove many of the ordinary data upon which we had rested up to that time.

It was precisely at this moment, that the knowledge of the last dressing of Lister flashed upon France, and this will constitute our

SEVENTH AND LAST GROUP—ANTISEPTIC DRESSING OF LISTER.

The antiseptic dressing of Lister, which made itself so remarkable, particularly by its excessive employment, exaggerated from the phenic acid, passed through a series of successive phases, transformations and modifications before it arrived at that degree of perfection, of which its adepts spoke with such satisfaction, and particularly, Dr. Lucas-Champonnié, in the interesting relation he gave to us of his visit to Edinburgh. (Paris, 1876.)

Far be it from me, from my profession, to disparage the dressing of Lister. I announce to you its incontestably important advantages. I voluntarily recognise the real progress which the Edinburgh surgeon has made in the treatment of wounds. I believe it would be unjust to deny it, but I do object to the exaggeration, to the exclusive tendency, which in my eyes, taints the discovery of Lister.

I will not say to you, gentlemen, that the dressing is a long and laborious one ; that the surgeon is entirely impregnated with this phenic odor, of which he rids himself only with great difficulty ; all that is of little importance, if, at the side of it, happy results come to largely compensate these inconveniences of an entirely inferior order.

First, let us enumerate all the articles necessary, and the details of this dressing.

Before the operation, the surgeon and his assistants lave their hands in a solution of phenic acid, 1 to 20, into which they also plunge the instruments, and with which they clean the parts to be operated upon. During the entire operation, a phenic mist envelopes the hands of the surgeon and of his aids, by means of a Richardson's pulverisator.

We pass to the pieces of dressing. 1st. The silk or protector, a sort of waxed taffeta, of a green color, and coated with phenic acid. 2d. The antiseptic gauze, which has been dipped in a phenic melange ; and 3d, and finally, the macintosh, a tissue made of cotton and caoutchouc.

These different pieces of dressing are applied successively ; the silk first, then the gauze in layers, and then the mackintosh, which should prevent the escape of pus and its contact with the air.

But before applying the dressing, what did Lister do ?

Amputation made, * * * the surgeon of Edinburgh, made the deep suture, then the superficial suture, leaving at each extremity, a passage, small as possible, through which he introduced an upright drainage tube, which reached to the bottom of the wound.

Now, gentlemen, putting aside for an instant the phenic acid and its action upon germs, are you not struck, as I am, with the similitude between the method of Lister and that of Azam ? Do you not see the remarkable coincidence ?

In each case, the deep and the superficial sutures, voluntary preservation of a cavity at the bottom, a sort of chamber into which an india rubber tube is pushed. Do not these two methods seem copied, the one from the other, with this difference, that Dr. Azam laid upon the bottom of the wound, his drainage tube, whilst Dr. Lister placed his upright ?

But, conscientiously, are not the two identical ? And Lister, as

great as may have been his faith in phenic acid, did he not insist after Azam, upon the prime necessity of allowing the liquids to escape, which would soon ferment, if left to accumulate in the cavity of the wound?

I am ready to admit, that at Edinburgh, they did not know of the communication of Dr. Azam, which dates, nevertheless, in 1871.

But, is that a reason, that in France, French surgeons in treating upon this subject, should make no mention of the works of the surgeon of Bordeaux? Now, for myself, that which is fundamental in the method of Lister, that which ought to be concerned, is exactly that sort of tripod which constitutes Azam's method, viz.; the deep suture, the superficial suture, and the cavity, drained by a tube.

I admit, nevertheless, that in the midst of all that, a considerable and real progress has been realized by Dr. Lister; for example, the employment of catgut ligatures, which are left to themselves, are soon absorbed, and so, are no longer foreign bodies, producing suppuration and preventing cicatrization.

Gentlemen, some of you may think I have too easily abandoned the discussion of the atmospheric germ theory, which dominates the publication of Dr. Lucas-Championniere—itself an echo of the English surgeon. You know already what I think of this grand theory, and I make atonement now for my apparent neglect, and all the more willingly, that I can nowhere find that an absolute and careful examination of the pus, proves the destruction of germs, so formally announced by Dr. Lister and his followers.

It was claimed equally for the wadding dressing of Dr. Alphonse Guérin, that the wadding filtered the air, clearing it of all germs, the pus soaked up by the wadding showing no trace of vibriones.

We have seen, nevertheless, that these vibriones do exist, and that without in any manner altering the health of the patient, or hindering in any manner the work of cicatrisation, or without detracting from the value of the happy results which have crowned this method. To my mind, when these results shall be regarded closely, we shall, perhaps, recognize the fact that phenic acid does not always prevent the formation of vibriones, and that the results of the dressing of Lister are not due to the destruction of atmospheric germs.

Now, the question is, has phenic acid some other property, of which we are to-day ignorant, or must we hold account with the catgut ligatures, and the two sutures, and the drainage of the cavity *retro-suturale*?

This is what we do not now know, and what I propose to search out with you and before you.

And this suggests to me a last reflection ; it is relative to the incessant efforts that we in France have made for the last twenty years to ameliorate and perfect the treatment of grand operations.

We have commenced, and I am one of those who have been the most persistent, a system of hygiene and aération.

I have shown in a work, which I read before the Medical Congress of Paris, in 1867, that our modifications in this respect had had good results, and I indicated the necessity of pushing further the prophylaxis of erysipelas and purulent infection in our hospitals. I showed the superiority in this point of view, of caustics upon the blades of the instruments. To-day, with the same purpose, that of lessening the two complications—already much diminished—of erysipelas and pyemia, I shall, as I have said, continue the study of dressings. Now, the question resolves itself into this : We are in presence of four kinds or methods of dressings. 1st. That of Alphonse Guérin, (that of occlusion by wadding,) which proposes to bring about cure by suppuration ; 2d. That of Azam (imperfect occlusion, with retro-sutural drainage), which expects cure without, or with very little suppuration, and by the intermediary processes ; 3d, that of Lister (phenic and completely occlusive), which conduces to the same result by the double suture, and the abundant employ of phenic acid ; and finally, by the alcoholic dressing. Which of the four methods merits the preference ? Will the superiority be acquired by some new modification of one or the other of these methods, or by a combination of some one of them with some others of them ? This is what we have to study, and I am sure that you who are to become the surgeons of the future, will profit by our searches for the best hygienic conditions in your choice of dressings, the results of which have been more happy than those at the beginning of our career.

P. S.—I had closed this lecture when Dr. Tachure, Medical Director of the Army, presented to me a memoir which he will publish upon the use of the siphon in surgical therapeutics.

Preoccupied, as we all are, with the dangers arising from the retention of the liquids in the wound, he has conceived the idea of continued hydraulic suction by a siphon. The cases which are related in this memoir, prove that Dr. Trachure has obtained so far the happiest results, and I propose to study and experiment upon it myself.

(Signed,)

PROFESSOR GOSSELIN.

(NOTE BY THE TRANSLATOR.)

In Number 104 of "*La France Medicale*," dated 27th of Dec. 1876, there are published two letters from Drs. Alphonse Guérin and Lucas

Championnière of which the editor says: "We hasten to publish them as it is a subject of great scientific interest, and as the discussion has been provoked by Dr. Gosselin in the critical examination he has made of this interesting question, with his incontestable ability and authority."

Dr. Alphonse Guérin says: "Dr. Gosselin is too great and well proven an authority, that I should allow the errors which have slipped into his lectures upon dressings to pass without correction. If the articles which you have published had come from some unrenowned surgeon I should disdain to say in what my dressing differs from that of which Dr. Gosselin has spoken."

He goes on to say that it is true that his theory is one of miasms, and which he has maintained for more than thirty years, and which theory, finally resolved itself into one of ferments and that this arose the point of departure for his dressings. He has maintained that it filters the air and prevents all noxious matters; dust of all sorts, vibriones, ferments, etc. from coming in contact with the wound. He says also that in the case mentioned by Dr. Gosselin, vibriones were seen, that the dressing had been made by his pupils, and although he had so much confidence in the dressing and in the fidelity of his assistants, he found on removing the dressings from a wound which he had especially invited Dr. Gosselin and Dr. Pasteur to see together, that the assistants had failed to wash the parts wounded, the wound being on a very dirty laboring man. He also claims that on the day when these two surgeons were invited to examine his method, there was but this one case in his ward, and that the condition found was entirely exceptional.

After complaining that Dr. Gosselin has unfairly treated a single case as typical of the whole method, he says: "I have said and I repeat, that nobody, before me, had indicated the mechanism and the conditions which my method fulfills, and I ask the insertion of a note which I originally wrote to Dr. Gosselin in the following terms: From my first dressings I have arrived at a combination of means, which *all have, I believe, their efficacy*. To prevent impure air from entering between the dressing and the skin, I envelope the member in a thick bed of wadding which permits me to exercise an *elastic compression*. By this compression, at the same time that I hold the wadding in contact with the wound, I prevent *all afflux of blood to the diseased part*; I prevent also all movement of the borders of the wound, establishing there *absolute immobility*.

"To *filtration of air, elastic compression, and immobility*, we must add, a constant thermal condition of the wound, as wadding has the property

equally with wool, of keeping the temperature of any body which it envelopes, always equable. Finally, when an amputating wound has been once dressed, we do not touch it for 25 or 30 days.

"Now the dressing which needs renewing most seldom is most favorable to cure."

He then says, that the charge of *slowness of cure*, although at one time true, is so no longer, as healing *by first intention is now the rule after grand operations*. He closes his communication as follows: "Since the most eminent surgeons do not know my ideas upon dressings, I find myself under the necessity of giving a course of lectures at the Hotel Dieu, and which I will publish. Perhaps I shall then put an end to erroneous interpretations of my method."

Dr. Lucas Championnière, also complains of *a fault in interpretation*, on the part of Dr. Gosselin.

"At least I can assure you that Dr. Lister would find a grave error in it." He also says: "The deep suture is in no sense a part of the anti-septic method. It is simply a supplement in cases where the parts have a tendency to gape, and that is all." He cites a case, among many which he has had of the same nature, in which he opened freely the articulation of the knee joint for the removal of a foreign body, placing in the wound a drain which kept it open, but which, nevertheless, cicatrised without suppuration, and he cites this case "in view of those profound modifications of the reparative processes, of which Dr. Gosselin takes no account." He adds that, at the side of the real advantages of the deep suture run also necessarily great dangers, which he has himself seen, and that the use of this suture must not be absurd. He denies the priority of Azam's claims, though he does not insist upon it; nor does he find fault with Dr. Azam's method, but he regrets "that a master of such high authority as is Dr. Gosselin should have made 'a priori' such a decision upon a method which appears to me to contribute powerfully to the grand progress of surgery."

Again, Dr. Albert Bergeron, who edited the lectures of Dr. Gosselin, says in a note in answer to Dr. Alphonse Guérin, that he (Dr. Guérin) has entirely misconceived Dr. Gosselin, who in a clinical lecture to his students was under no obligation to argue the matter as he would have done before a meeting of the academy; that while the dressing of Dr. Guérin is good, his (Dr. Gosselin's) experience with it was that the cure was slow, and "we must search to find if, by the aid of other methods, it will not be possible to obtain more rapidly definite cicatrisation. That is the entire question, and it remains to be answered by experiments."

HOSPITAL RECORDS.

UNIVERSITY HOSPITAL, BALTIMORE, MD.

REPORTED BY T. A. ASHBY, M. D., Resident Physician.

EPITHELIOMA OF THE PENIS—SERVICE OF PROF. CHRISTOPHER JOHNSTON.

A. B., a light mulatto, aged 52, was admitted into the hospital in September, 1876, suffering epithelioma of the penis. He stated that the disease first appeared as an eroding ulcer upon his penis, situated upon the left corona glandis, and in the corresponding part of the prepuce. When first examined the sore was rough, ragged, full of profuse ichor-pus, and very fetid. The inguinal glands were not involved. Examination of the debris with the microscope determined the epitheliomatous nature of the ulcer. The patient stated that the disease first appeared two years ago as a small nodule, which slowly enlarged until four months ago, when it ulcerated. He was advised to have it removed, and after much delay and hesitation consented. A large gum catheter was first introduced into the bladder, and the tube secured by means of a stitch passed through the urethra. The écraseur was applied and the anterior three-fifths of the penis removed. After the operation the divided end of the catheter was easily found, and the piece withdrawn. The patient made a rapid recovery, and was discharged cured.

In February following there were evidences of a reappearance of the disease in the stump, and in the month of May it had progressed so far that a second operation became necessary. The patient was placed upon the table and etherized. He was posed as for lithotomy, and an incision was made in the perineum through the bulb and urethra, cutting upon a grooved staff. The mucous membrane of the urethra was next attached by silver wire sutures to the skin; and the corpus spongiosum transversely divided with scissors at the distal end of the incision, one half inch in front of the triangular ligament, and the gap filled with lint saturated with Monsel's solution. The écraseur was next applied to the penis, as near to the symphysis pubis as it could be gotten, and the diseased mass removed. The vessels were tied and the stump dressed with carbolized boiled linseed oil. A few days after the operation solid chloride of zinc was applied to the copra cavernosa in front and behind the scrotum, with the view of removing more of the organ by slough. The patient improved rapidly, and was discharged cured within four week's time. He now passes urine in the sitting posture with perfect ease. The new feature in this operation was the separation of the penis

in front of the triangular ligament, thereby cutting off all connection with the prostatic portion, and preventing as far as possible any extension of the disease in the event of a return.

FIBROID TUMOR OF THE UTERUS—SERVICE OF PROF. W. T. HOWARD.

Mrs. M., aged 45, mother of eight children, was admitted into the hospital for hemorrhages from the womb of four years' duration. She was pale and anæmic from frequent and profuse losses of blood.

Upon vaginal examination, a fibroid tumor was found occupying the cavity of the uterus, greatly distending it, and protruding through a dilated cervix into the vagina. The perineum had been ruptured in a previous labor, allowing the uterus to be dragged from its position, and the tumor to protrude at the vulva. The appearance was that of a woman in labor, when the head of the infant presents at the vulva.

The woman was placed on tonic treatment until her general health was sufficiently improved for an operation, which was performed in the fifth week after her admittance to the hospital. The tumor was removed by the use of the écraseur without the slightest hemorrhage. It was attached by a broad pedicle to the fundus of the uterus. The tumor was round, measuring three inches in diameter.

By accident, in the use of the vulsellum forceps, in removing the tumor, an incision was made through the vagina into the bladder. This was closed by wire suture and healed by first intention, though the operation was not performed until a week after the tumor was removed. The patient made a rapid recovery and was discharged cured.

AN EYE TRANSFIXED BY A PIN—SERVICE OF PROF. J. J. CHISOLM.

Miss R., aged 25, applied for treatment with a right eye in which there was only perception of light. The lens was too cloudy to admit of an accurate examination of the fundus, but the opacity was not sufficiently thick to explain the nearly total loss of sight. She gave this very interesting history: Five years since, in shaking a piece of carpet that had been lying upon the floor of the chamber, something got into her eye; she supposed it to be a particle of dust; her mother examined the eye, but could find nothing. The pain in the eye still continuing, the eye was again more thoroughly examined, with no better result; she was about dismissing the search when her attention was attracted to a glistening white spot on the upper surface of the now closed upper lid. In trying to brush it off she found it firmly sticking. She seized it between her fingers and pulling it off, was surprised to find it the head of a pin, followed by its entire shaft. It had been imbedded in the lid and eye, literally pinning the lid to the eye ball. In the sudden flapping of the carpet the pin (such as are commonly used in the toilet of ladies, and

over an inch long,) lying loosely upon the carpet had been projected upwards point forward, and with such force that when driven against the eyelid it had transfixed it, then perforating the sclerotic behind the ciliary regions had transversed the vitreous chamber, and had protruded its point from the posterior wall of the eye ball. With the removal of the pin the eye seemed in condition to resume its work, and gave no trouble for three months ; then vision commenced to fail, and the eye became painful. Some months after this, when sight had become nearly extinct, she had her eye examined, and a detachment of the retina was then discovered. The lens did not lose transparency for some years after the accident.

SPLINTER OF WOOD LYING ON THE ANTERIOR FACE OF THE CRYSTALLINE LENS SUCCESSFULLY REMOVED—SERVICE OF PROF. J. J. CHISOLM.

Miss S., aged 4, was playing upon a slatted bed ; in jumping upon it one of the slats snapped, and a piece flying up struck her in the face. Complaining much of pain in the eye the family physician was called in. He found a small wound on the upper eye-lid, which was considered a satisfactory explanation for the pain which the child suffered. As the pain continued, the eye was again looked into by the physician three days after the accident, when a white deposit was discovered in the pupil. The case was now considered a serious one of inflammation within the ball, with already inflammatory deposit, and the child then came under my observation. Upon inspection, the small scar already referred to as a recent punctured wound was still visible on the centre of the upper lid. In a good light a singular yellowish-white substance as a heavy vertical line was seen across the pupillary opening. Under atropia, the contrast between the black pupil and the sharp linear definition of this substance showed it to be a foreign body, and not an inflammatory deposit as had been supposed. The extended dark background now brought to view a conical wound which corresponded with the lid puncture when the eye was closed. The diagnosis was made of a splinter of wood lying upon the capsule of the lens with ends caught in the tissue of the iris. Under chloroform an opening was made in the upper border of the cornea, and by means of a canula forceps the fragment of wood was securely seized, carefully disentangled from the iritic tissue, and safely removed. No trouble followed upon the operation, and a perfect eye was regained. The pine wood splinter 3-16 of an inch in length, after perforating the eye was torn off by the weight of the slat, and the movements of the upper lid by changing the direction of the splinter in the interior chamber permitted it to fall into the cavity, and take up its awkward position.

BIBLIOGRAPHY.

ANALYTICAL AND CRITICAL REVIEWS.

Civil Malpractice : A Treatise on Surgical Jurisprudence, with Chapters on Skill in Diagnosis and Treatment, Prognosis in Fractures, and on Negligence. By Milo A. McClelland, M. D. Boston, H. O. Houghton & Co. 1877.

Both the medical and legal professions have long felt the need of a standard and representative work on surgical jurisprudence, and it is consequently with no little anxiety that we have awaited the appearance of the present volume. Let us see what we have gained by its acquisition : A number of carefully selected malpractice suits given in detail comprises the greater portion of the work, but when we come to look for the analysis of these cases, we must acknowledge our disappointment. At the same time the work is one of merit, and cannot fail to impart both pleasure and profit to its readers. It is not such a work as is most needed, and we hope that, in a second edition, the author will save the reader the trouble of digesting the material presented, and make it really a *treatise* on surgical jurisprudence. The volume is well printed and neatly bound.

SPECIAL NOTICE TO SUBSCRIBERS.

At the last annual meeting of the Association of American Medical Editors, held at Chicago in June, 1877, the matter of improving the periodical literature of the profession in this country was very freely discussed ; and, as the number of medical journals is too large, it was thought most desirable that there should be a concentration of forces. Believing that such a course would be for the benefit of the profession, we have determined, at considerable sacrifice, to take the initiative in the matter, feeling that in so doing we would be supported by our readers. Accordingly we have perfected arrangements whereby this periodical will appear hereafter in connection with **THE HOSPITAL GAZETTE**.

The first number under the new arrangement, to be published on the first day of October, will be known as **THE HOSPITAL GAZETTE AND ARCHIVES OF CLINICAL SURGERY**, and the form and size of the latter journal will be retained.

The editorial management will be vested conjointly in Drs. Edward J. Bermingham and Frederick A. Lyons, who will be assisted by an able corps of collaborators and reporters, and no trouble or expense will be spared to make this journal the representative one of the country.

As the journals have been issued in the interest of the profession, it is but just that they should reap the benefit of our very much increased circulation, and accordingly it will be published at the unusually low price of \$1.50 per annum, including postage. Those gentlemen whose subscription to the **ARCHIVES** has not yet expired will receive full credit for balances, which will be transferred at the new rates. Statements of accounts will be sent to all subscribers on October 1st.

THE HOSPITAL GAZETTE

AND

ARCHIVES OF CLINICAL SURGERY,

A Semi-Monthly Journal of Medicine and Surgery,

EDITED BY

Edward J. Birmingham, M. D., and Frederick A. Lyons, M. D.

VOL. 2, No. 6.

NEW YORK, OCTOBER 1ST, 1877.

WHOLE No. 15.

CONTENTS.

LECTURES.

Lectures on Opium as a Stimulant: By W. H. Thomson, M. D., of New York.....	202	Clinical Remarks on a Case of Fibrous Tumor of the Pylorus: By Alonzo Clark, M. D., of New York.....	204
---	-----	--	-----

ORIGINAL ARTICLES.

Case of Empyema, with remarks concerning Prof. Guido Bacelli's method of diagnosing between Serous Effusion into the Pleura and Empyema: By Robert Reyburn, M. D., of Washington.....	207
---	-----

TRANSLATIONS.

On Retention of the Placenta by Atmospheric Pressure: By Dr. A. Luton.....	210
--	-----

HOSPITAL RECORDS.

ROOSEVELT HOSPITAL, NEW YORK. REPORTED BY W. B. BERRY, M. D.			
Rupture of Urethra (traumatic), Post-peritoneal Extravasation of Urine.....	212	Prolapsus Ani treated by Stretching of the Sphincter.....	214

ST. VINCENT'S HOSPITAL, NEW YORK. REPORTED BY ABRAHAM G. WENDELL, M. D.	
Wound of Scrotum followed by Gangrene.....	215

PERISCOPE.

Summary of the Therapeutic effects of Salicylic Acid: By J. Hughes Bennett (Dr. Hudson) 216		The Treatment of Angular Curvature of the Spine by a Gutta-Percha Mould: By Thos. James Walker. (Dr. Shaffer).....	220
Endocardial Vegetations at the Orifice of the Pulmonary Artery: By Dr. Dujardin-Beaumetz (Dr. Hudson).....	217	Stahl on the Anatomy and Diagnosis of Ovarian Tumors, developed partly within and partly without the Peritoneum. (Dr. Foster).....	221
The Operative Treatment of Genu-Valgum: By Alex Ogston, (Dr. Shaffer).....	218	Benike on the Treatment of Cancer of the Uterus during Pregnancy. (Dr. Foster)	223
Observation on Pericarditis with Effusion: By M. M. Montez and Dublef (Dr. Hudson)	219		

ABOUT BOOKS.

The Practitioner's Reference Book, by Richard J. Dunglison, M. D.,.....	224
---	-----

NOTE.

OUR readers will see by this number that we have increased the size of the journal still more than we anticipated, so that three times the amount of matter formerly furnished in the GAZETTE, or half as much again as the ARCHIVES contained, is presented. The change, we know, will be welcomed, especially as the remarkably low subscription price places this standard journal within the reach of every practitioner and student of medicine. The delay in the appearance of this number has been occasioned by a change of printers, and was unavoidable. Our next number will be about a week behind time, but after that the journal will appear promptly on the 1st and 15th of every month.

LECTURES.

LECTURES ON OPIUM AS A STIMULANT.

Delivered at the Medical Department, University of New York,

BY

W. H. THOMSON, M. D.,

Professor of Materia Medica and Therapeutics.

PART I.

IT would conduce greatly to a better understanding of the action of neurotics if it were borne in mind that they are agents which in each case affect only certain nervous functions. There is no neurotic in existence which "affects the nervous system," that is, the whole of it, unless in the one way of causing death. In opium, for example, we have a drug which specifically influences more nervous functions, perhaps, than any other one agent that can be named; and yet, should we enumerate them all, they would constitute but a small number of the great multitude of nervous operations. The nervous system can never be acted upon as a unit like a single muscle, which either contracts or relaxes, or even like a single organ, as the heart, whose action, as a whole, may either be stimulated or depressed.

Another consideration which bears upon our subject is, that at no moment of our lives can all the functions of the nervous system be called into activity at once. A great many of them must be quiescent while others act, while many are even directly antagonistic or counterbalancing to others. We have, for example, nerves which stimulate certain secretions, and nerves which arrest them; nerves which are motor excitants, and their opposites, or inhibiting nerves; and we might continue this comparative survey until analogies of this kind might be found to obtain in the majority of the operations of the nervous system. Now, in accordance with this law, it is obvious that the action of neurotics, instead of being capable of simple or easy classification, often presents us with some of the most complex problems in medicine. The agents, for instance, which we can properly term pure stimulants, like ammonia, or pure sedatives, like prussic acid, are few and relatively unimportant, because their action is limited to single nerve-centres or functions, and hence they are far inferior to those which affect a number of nerve-functions; for no medicine can operate widely on nerve-functions without appearing in very different aspects, according to the centres affected, and hence also capable of many different applications. It is on this account that our most important neurotics are classed, both as stimulants and as sedatives, from the unmistakable evidence they give of both these kinds of action. Alcohol, for example, is a great stimulant, but equally a powerful depressant; and to a similar, or even greater degree, is this the case with opium.

The erroneous conception, however, of the nervous system as one organ,

so to speak, with a sufficient uniformity in function to justify the use of such terms as "general nervous stimulants," or "general nervous sedatives," leads to an equally mistaken conception of the action of those leading neurotics which are both stimulants and sedatives. We are, therefore, told that these agents can act thus only in one way, namely: that they produce an excitant or stimulant impression first, and then a lowering or sedative impression afterward. Now, this is true only to a limited extent in any case, the fact being that both the stimulation and sedation are far more commonly *simultaneous*, the effect being directly stimulant to the function of certain nerve-centres only, while other nerve-functions are just as directly and immediately depressed. In the same fashion that a hearty meal interferes with or diminishes the activity of certain cerebral functions, because a great demand for nerve-power, as well as for blood, is then made by the organs of digestion, so a full dose of opium, while greatly exciting certain intellectual operations at the same moment, suspends digestive secretion, and paralyzes the peristaltic movements of the intestines. Moreover, this same agent, while operating like a very effective astringent in the intestine, bedews the skin with a profuse perspiration. In like manner, while studying the actions of alcohol, it will be noted that along with the production of a specific stimulation of those cerebral centres which are related to the emotions and the feelings, and an equally specific stimulation of the heart on the one hand, we will find, on the other hand, that from the moment it has entered the circulation, the whole sensor system of nerves has become blunted, and increasingly so with each apparently increased excitation of the other functions. The æsthesiometer will almost immediately record a decreased sensibility at the tip of the third finger or the tip of the tongue, or the ingestion of an ounce of brandy by a person with a normal condition of those parts; and ere long the man whose sensations seem so highly excited, and whose flushed face and bounding pulse deceptively imply a great increase of nervous activity, finds that his brain is receiving very imperfect information, through his afferent nerves, of the whereabouts of his legs, and though anything but paralyzed in his motor powers, yet his movements have "a great tendency to nowhere." There could scarcely be any idea so mischievous in practice as that you can at any time get nothing but stimulation from alcohol, by the administration of only stimulant, and not intoxicating or narcotic, doses. Every dose of alcohol, large or small, carries along with its stimulation of certain nerve-centres the simultaneous depression of others, so that it is often a question whether, in many instances, the price paid for the stimulation be not altogether too high.

There is, however, such a thing as a real depression following upon stimulation, but in that case it occurs in the stimulated functions only, and always indirectly. Thus we often see the "spirits" which had been raised by alcohol, afterward correspondingly lowered; but when this is the case, the said spirits have not been depressed by the alcohol at all. Its own specific action is always to excite them, and this subsequent depression is only the sign of exhaustion from over-stimulation, and hence never to be sought for as a medicinal operation. Now, if this were the

only kind of depression which alcohol produces, we could escape it by abstaining from over-stimulation by too great doses, and on the same principle we would not think of employing alcohol for its specific sedative properties; that is, if these could be secured only after an undue excitement. But the truth is, that in many cases alcohol is a most valuable remedy, not as a stimulant, but as a sedative, through its securing rest to certain nerve-functions, by blunting their undue sensibility, not secondarily or subsequently, but directly and immediately.

This principle, therefore, that certain neurotics are both stimulants and sedatives at the same time, by operating on different nerve-functions in opposite ways, and therefore when any one function is first stimulated by them, and afterward becomes depressed, the depression is then merely indirect and secondary:—this principle, I say, should lead us to study, not the stimulation nor the depression, as such, but rather to discriminate which particular nerve-functions are stimulated, and which are depressed. In the present instance our subject, "Opium as a Stimulant," can be dealt with in no other way; for, if we should regard this great agent as in any sense a general nervous stimulant, or, on the other hand, that it can at any time act medicinally as a general sedative, we would have to give up the question in despair at its many seeming contradictions. The instantaneous relief of pain, for example, by a "hypodermic" of morphine, is certainly neither a secondary nor a stimulant effect, and yet along with it such a pleasurable excitement of the imagination and of the fancy occurs, that many persons fall in love, as it were, with the once-dreaded needle. Moreover, simultaneous with the benumbing of the painful sensation, the heart often immediately responds to the effect of the injection in a fashion which is as unmistakably of the nature of stimulation of its beat as any other kind of stimulation that can be named. Our questions, therefore, now are:—1st. What nerve-centres or functions are stimulated by opium? and, 2d, What are the special characteristics of such stimulation?

(To be continued.)

CLINICAL REMARKS ON A CASE OF FIBROUS TUMOR OF THE PYLORUS.

Delivered at the College of Physicians and Surgeons, New York,

BY

ALONZO CLARK, M. D.,
Professor of Pathology and Practical Medicine.

GENTLEMEN:—This man tells us that he has suffered from vomiting for the last three years. It generally occurs after eating, but the time elapsing between the act of eating and the vomiting varies from ten minutes up to an hour or two. The vomiting does not occur after every meal, as he sometimes escapes, but he seldom misses a day without its occurrence. He says that he seems to vomit a larger quantity of material than he eats; it looks yeasty in appearance, and has a very sour taste.

Lately he thinks that he vomits a little less than he used to. He complains of pain across the epigastrium, and a little in the right and left hypochondriac regions. Last winter he vomited a very black-looking material, which he describes as looking like liver, but since that time he has not had any recurrence of this kind of vomiting. He complains of considerable distress in the stomach after eating, when it remains down, but on vomiting, which comes on spontaneously, he feels much relieved. He says that he has lost about twenty-two pounds in flesh during the last year.

A puzzling point in this case is the long duration of the vomiting. There are, as you know, a number of conditions of the stomach that provoke vomiting, and particularly after eating. One of the principal of such causes is some obstruction at the pyloric orifice. Ulcer of the stomach may be situated here, as likewise cancer: and these are the two most frequent causes. Such vomiting may also be due to the presence of tumors external to the stomach itself, but from their proximity exerting pressure on the pyloric opening. I have known of several such instances where the cause was a fibrous tumor situated outside of the stomach, but making pressure on it. Then, again, dilatation of the stomach will cause vomiting of long duration, as in the case that came before us last week, in which the woman had excessive dilatation, with continual vomiting, during a long period of time. Still such cases are comparatively rare. Vomiting also occurs from simple dyspepsia; but commonly in this condition it is not spontaneous, but is caused by the patient passing the finger down the throat, as the emesis relieves the distress produced by the food in the stomach that cannot be digested. Again, it is not apt to be regular. Any abnormal condition of the gastric mucous membrane will produce vomiting. In inflammation of the stomach the food, immediately after it is introduced, is rejected; considerable glairy mucus is vomited with it, and there are fever and other constitutional derangements. But there is nothing like this present in the case before us, though there may be a condition of chronic gastric catarrh, which, however, is not the original cause of the trouble.

On examining the patient's abdomen, we notice, first, that there is a slight fulness on the left side, which does not exist on the other. On the left side we discover a little knot, about as large as the end of the finger; it is quite hard, and moves freely up and down as the patient breathes. When he inspires, I feel it come downward under the finger, and as he expires, it recedes upward again. This is just about in the position of the pylorus, and must be situated there. It is much harder than a fecal mass in the colon would be.

On percussing the stomach, we find it to be pretty large, reaching in a downward direction nearly to the umbilicus, and as far over to the left as a line drawn perpendicularly downward from the axilla. There is then some dilatation, which is due, in all likelihood, to an obstruction at the pylorus.

When I first put my finger on the small tumor at the pylorus, it was so distinct that I thought it might be situated in the abdominal wall, but

on examining more carefully, it is found to be slightly movable underneath, and to move up and down with the other contents of the abdominal cavity, during respiration.

I am inclined to believe this tumor to be a fibrous growth, situated outside of the stomach, but exerting pressure on the pyloric orifice. I do not think that it is carcinomatous for several reasons. He has not had very much pain, and he does not seem to be constitutionally affected to any degree. By this time he would exhibit in some measure the cancerous cachexia. It is now of three years' duration, and has grown quite slowly, while cancerous tumors are, as a rule, rapid in their growth.

These fibrous tumors have in one respect a very interesting history. They grow slowly, beginning at a particular point, and then spreading to adjacent parts. All the tissues finally become involved. The fibrous infiltration first takes place in the sub-peritoneal connective tissue, and then penetrates the other tissues in succession, till it reaches the mucous coat, which, in its turn, becomes involved in the thickening. The mucous follicles become very much elongated. In their normal condition they are simply short tubules, imbedded in the mucous membrane, but when they are examined under the microscope, in this diseased condition, they appear very much longer, as compared with their normal size. The mucous membrane grows and thickens inwardly, leaving the follicle in its original site, and in this way takes the shape of the tube, apparently increasing the length of the follicle.

After the thickening process has continued, by and by ulceration takes place, the vomiting becomes more and more frequent, the constitution breaks down, and the patient finally dies.

The principal question now for this patient is, What kind of food he must take? This matter he must determine for himself by experience; he must find out what kind of food his stomach will bear best, and then adhere to it. In some cases milk is best, which may be assisted by a little pepsine. In others beef and bread may be digested. In others still, the food must be digested before it is eaten: in such cases peptone is very useful. I recall to mind the case of a young man who suffered from continuous vomiting for ten and twenty days at a time. He was very much exhausted, and could receive no nourishment, as nothing could be kept on the stomach. Being called in consultation, I advised him to take peptone, when the vomiting was stopped, and he recovered. A couple of years afterward I saw him suffering in the same way, and again advised the same treatment. He was unable to procure the peptone at first, however, and other things were substituted, but he did not get well. Finally he was enabled to procure it, and after a short treatment he recovered.

In other words, we must give the meat digested first outside the body, and then we may be able to stop the vomiting. Leuber's preparation, which consists of beef digested in hydrochloric acid, may serve the indications as well as peptone. It is expensive, however, and perhaps a person in this man's circumstances may not be able to afford it; so we will let him try first 10 or 15 grains of pepsine with each meal, and see how he progresses.

ORIGINAL ARTICLES.

CASE OF EMPYEMA, WITH REMARKS CONCERNING PROF. GUIDO BACCELI'S METHOD OF DIAGNOSING BETWEEN SEROUS EFFUSION INTO THE PLEURA AND EMPYEMA.

BY

ROBERT REYBURN, A. M., M. D.,

Late Professor of Anatomy, Medical Department, University of Georgetown, Washington, D. C.

HAVING read with great interest the abstract of Prof. Bacceli's paper on the diagnosis between empyema and thoracic serous effusion, published in *American Journal of Medical Science*, July, 1876, No. 271, I determined to test his theory on the first suitable case that should present itself.

On December 8, 1876, was called in consultation with Dr. Theodore Meade, of this city, to visit a patient under his care, and found him to be a white child of slender physique, and aged about nine years; he was in such a debilitated condition that it was with great difficulty we could induce him to submit to the requisite examination necessary to properly diagnose his case.

On examining the chest, the left side of the thorax was found to be filled with a liquid effusion to the extent of about four-fifths of its capacity; the heart was displaced to the right side, and the apex of the heart could be seen distinctly beating, half an inch to the right of the sternum; pulse was 128, and very weak.

The history of the case seemed to point to a case of empyema. The patient, about eight months previous to my seeing him, had been attacked with acute pleurisy of the left side, with effusion; under treatment he improved, but still continued to suffer more or less since that time. For the month previous to my visit he had shown unmistakable symptoms of hectic fever, accompanied with the usual night sweats and great exhaustion.

Prof. Bacceli states, in the article above quoted, that "the vibrations of sound in liquids are transmitted *inversely* to their density. In a serous fluid, therefore, the sound passes more readily than in a purulent; and it is found that, whereas the whispered voice (*la parola aforcicamente sillabata*) can be heard clearly accompanied with bronchial expiration at the base of a serous effusion, the spoken voice is not transmitted, nor bronchial breathing heard, over a purulent exudation."

It was mutually agreed upon, by the attending physician and myself, that the present case would be an excellent one to test Prof. Bacceli's theory; and, in conformity to his directions, the patient was placed in the semi-recumbent position, with his head turned to the opposite side from that in which the effusion had taken place, so that an imaginary line drawn from the mouth of the patient would pass through the centre of the effusion, in reaching the ear of the auscultator (which was placed at the lower portion of the chest).

On causing the patient to whisper the words "ninety and nine," slowly repeated, if the effusion were purulent, we should not, according to his theory, hear the vocal resonance; but, if it should prove to be serous effusion, vocal resonance ought to be heard. The result of the examination showed that vocal resonance was distinctly heard by both physicians present, and this fact seemed to demonstrate the existence of serous effusion within the cavity of the pleura. This result, it will be remembered, was different from that anticipated by the attending physicians, as both had expressed the opinion that this was probably a case of empyema.

The next day, December 9, 1876, a fine canula, 1-16 of an inch in diameter, was passed into the posterior portion of the chest, about one inch below the inferior margin of the scapula, and about 1½ pints of pure pus were slowly withdrawn.

For reasons connected with the history of the case, this course was deemed better than to remove the fluid by the use of the aspirator.

On the next day the patient's condition was much improved, pulse 112, and respiration was much easier. He was placed upon the use of iron and quinine, with nourishing diet, and was also given 3-grain doses of iodide of potassium combined with 5 grains of muriate of ammonia three times a day. He improved for a time under this treatment, and after a few days was left in charge of the attending physician.

On December 30, 1876, was again requested to see, in consultation, the same patient, and found an evident re-accumulation of the effusion. His case was again carefully auscultated, and the vocal resonance was again distinctly heard, after placing the patient as directed by Prof. Baccelli.

The trocar was again entered at about 1½ inches below the inferior angle of the scapula, and about 1½ ounces of pure pus were gradually removed by means of the canula, and about an equal quantity, as was estimated, flowed spontaneously from the opening in the chest made by the trocar.

The patient was then placed under a similar course of medical treatment to that adopted after the first tapping, has continued to improve, and is now convalescent.

The chief reason that has induced me to report the above case has been to base upon it a few remarks concerning the reliability of Prof. Baccelli's method of diagnosing empyema from serous effusion.

As will be seen in the above case, it utterly failed; and I may also here state that I have applied it to three other cases since the one above mentioned, and have found it totally unreliable. It is of course, as a rule, very unwise to judge of the futility of a means of diagnosis by its failure in a few cases, and yet the chief peculiarity of Prof. Baccelli's theory is that he claims that it depends upon a law of physics; and if such were the case, it is evident that it must invariably be true, and cannot admit of exceptions.

If the so-called law of physics in this instance does not prove invariably true, then the professor has either erred in his enunciation of the law, or in its application to the phenomena sought to be explained.

To return to Prof. Baccelli's paper. He commences by stating as an axiom "that the vibrations of sound in liquids are transmitted inversely to their density." That there can be no mistaking the meaning of the professor, is evident from the fact that on this so-called law of physics he bases his whole theory of diagnosing empyema; for he says that "in a serous fluid (that is, the lighter of the two), the sound passes more readily than in a purulent." Now we think that an examination of this axiom will show that the learned professor has erred, and that his statement of the law of conduction of sound in liquids is precisely the reverse of the truth. In "Ganot's Physics" (American Edition, p. 161) will be found a table showing that the ticking of a watch can be heard in air at the distance of 10 feet, in alcohol 13 feet, in oil $16\frac{1}{3}$ feet, and in water at the distance of 23 feet. I may also refer to "Prof. Tyndall on Sound," or indeed to any text-book on natural philosophy, which will show that sound is transmitted with a loudness proportionate to the density of the liquid, and *not* inversely, as Prof. Baccelli states it. On page 166 of Ganot will also be found a table showing that sound is also transmitted much more rapidly through dense liquids than through rare ones.

Another argument of no little weight in the consideration of this question, and which also tends against Prof. Baccelli's theory, is, there is, after all, not a very great difference between the specific gravities of the fluids found in the cavities of the chest, in cases of empyema and serous effusion. These fluids are, indeed, both formed from the watery parts of the blood; and the only difference that chemistry or the microscope can detect between them is, that the fluid formed in cases of empyema contains a very much larger number of leucocytes, or white blood corpuscles, than the fluid of serous effusion.

Pus, indeed, as found in cases of empyema, in the greater majority of cases results from the transformation, by the action of air or other irritant, of the serous effusion which had been previously poured out into the cavity of the pleura.

It is, to say the least, highly improbable that fluids so nearly alike in their physical properties, as pus and the liquid of serous effusion, should differ so essentially in their propagation of sound.

The last point to be considered is the explanation of the non-transmission of sound in the cases spoken of by Prof. Baccelli. The eminence, as a teacher and lecturer, of the professor entirely precludes the idea of his being mistaken in the facts of the cases detailed by him, and the following is respectfully suggested as an attempt at explanation:—

The first reason that suggests itself why the vocal resonance is not heard in certain cases of empyema and serous effusion is, that its being heard or not depends greatly upon the smaller or larger amount of liquid which may be contained within the pleural cavity. If the amount of serous effusion is moderate in quantity, the vocal resonance is usually increased just as it is in the early stages of pneumonia or in incipient phthisis, and sometimes giving us the sound formerly known as *ægophony*.

If, on the other hand, the bulk of the effusion is such as to fill, or nearly fill, the pleural sac, thus flattening and compressing the lungs against the posterior and superior parts of the thorax, no vocal resonance is heard; simply because the auscultator's ear is separated by a mass of fluid, 5, 6, or more inches in thickness, from the air tubes which would otherwise conduct the sound to his ear.

The next reason assigned for the non-production of vocal resonance is the compression of the air tubes by layers of lymph deposited on the surfaces of the pleura, thus closing the lumen of the bronchial tubes, and impeding the transmission of sound or air.

The next and last reason we will assign, and one that probably bears an important part in the non-production of vocal resonance, in cases of chronic empyema especially, is the maceration and disorganization of lung texture by the long-continued action of pus or purulent material upon delicate lung-tissue. Whilst we know that pure or laudable pus is innocuous and will not injure the most tender granulations, yet such can scarcely ever be said of the pus found in the chest in cases of empyema. A fluid which is capable of producing such grave constitutional disturbance, and such a high degree of irritative fever, must, by its presence and pressure upon the lung, greatly injure its texture; and that such is the case, is amply shown by the post-mortem examinations of patients dying from empyema.

We believe, therefore, as above stated, that the transmission of vocal resonance depends, not upon the fact of the effused fluid being serous or purulent, but upon its quantity, and upon the amount of compression and injury to its texture sustained by the lung.

TRANSLATIONS.

ON RETENTION OF THE PLACENTA BY ATMOSPHERIC PRESSURE.

Communication to the Medical Society of Reims,

BY

DR. A. LUTON.

WHEN, after the expulsion of the foetus, the placenta in its turn has become detached, there comes a moment when, free from adhesions, it falls with all its weight, and more or less exactly in the centre, into the uterine orifice, which already has a tendency to re-close. If at this instant, and without other precaution, we exercise traction on the umbilical cord, we draw toward the vagina that part of the placenta from which it takes its origin, and leave above more or less of a vacuum, which very soon becomes filled with blood, on account of the condition of things brought about by this manœuvre. This is caused by the same mechanism as that of a rubber cupping-glass, or, better still, and the comparison is here in place, according to the method of action of Simpson's "sucker-tractor."

Undoubtedly this condition of things does not occur very often, for there must be a certain degree of precision in the adaptation of the sides of the placenta to the periphery of the uterine cavity, and, above all, because the blood flows quickly into the open sinuses, to fill up the empty space which is apt to be formed.

In this way we see how there can be a cause of internal post-partum hemorrhage, which we may call "*hemorrhage by aspiration*," and which, in certain cases, may present some gravity.

But suppose that by the arrangement of the parts it so happened that the open sinuses should be situated outside of the sphere of attraction of the placental cupping-glass, or that through some other circumstance the blood could not flow out, notwithstanding this suction, then it would happen that the uterine wall would be drawn toward the vagina, and would become inverted, very much like the finger of a glove turned inside out: it is this which sometimes leads us to believe that there is a real adherence of the placenta, or that it has not yet become detached. Things then remain in this condition until eventually something permits the air to insinuate itself between the two adjacent surfaces, or until the blood, accomplishing the same object, causes an actual separation. In this latter case the superior surface of the placenta forms a pocket occupied by a large clot of blood, or by blood still in the liquid condition.

Thus two accidents may be the result of this separation by a vacuum of the uterine and placental surfaces: partial inversion of the uterus, and intra-uterine hemorrhage.

This happened, more or less completely, in a case which I lately observed, and perhaps is more frequent than we think.

CASE.—A multiparous woman, thirty years of age, was confined about 3 o'clock in the afternoon. Everything passed off well enough, but the after-birth was very slow in being delivered. The midwife who had charge of the confinement, after several efforts at traction, from which she desisted for fear of breaking the cord, which she thought was weak, and because she felt the wall of the uterus coming down, believed that the placenta was adherent, and sent to find me.

It was 6 o'clock in the evening, that is to say, three hours had elapsed since the birth of the child, and we now had more to fear from obstruction at the neck. After some pulls, which I gave quite vigorously, for the cord appeared to me to be very strong, I had not accomplished anything more than the midwife had done, and I very distinctly felt the wall of the uterus sink down at each fresh effort. I then put my right hand into the vagina, and up along the right side of the placenta, in order to detach it; at the same moment a very easy pull made on the cord by the left hand brought the after-birth outside.

Although unaware of what I had done, for I thought that I had in reality broken some close adhesions, I practised the operation in the same way in another quite similar case; and the ease with which the thing was accomplished fully proves that the simple penetration of air allows the two surfaces to separate, and as a consequence that they are kept together only by the atmospheric pressure.

If this be true, it is clear that, when the delivery of the placenta is delayed, it is better at once, not to pull perpendicularly on the cord, on the very centre of the placenta, but well over in an oblique direction; at the same time pass the hand along the side of the organ, as if to lift it up and detach it. It is thus that we detach a rubber cupping-glass applied on a plane surface.

It is probable that the circumstance we have here commented upon is common enough, but, if it has been mentioned before by any one, we are unaware to whom we should give the credit of it.

F. A. L.

HOSPITAL RECORDS.

ROOSEVELT HOSPITAL, NEW YORK.

Reported by W. B. BERRY, M. D., House Surgeon.

RUPTURE OF URETHRA (TRAUMATIC), POST-PERITONEAL EXTRAVASATION OF URINE. (SERVICE OF DR. WEIR.)

John Hughes, aged 55.—Wales,—Tailor,—Widower. Admitted May 8th, 1877.

Patient was an inmate of the hospital in November, 1874, suffering from stricture of the urethra, which was relieved by internal urethrotomy. Since leaving the hospital he has been in the habit of using sounds, and up to last January had no trouble in passing urine, but at that time was exposed to cold, and subsequently had severe pain in the back, and several attacks of retention. He says that at such times he passes the sound, and in a short time is able to empty the bladder. On May 6th he endeavored to pass the sound during one of these attacks, and, as he says, made a false passage. He passed blood, but no urine. In the evening he had a severe chill of half an hour's duration, not followed by fever. From the morning of the 7th till late in the afternoon of the 8th he passed scarcely any urine.

On admission patient is very stupid and drowsy, pulse weak and rapid. Abdomen somewhat tympanitic, bowels constipated. *Urine* 1012, alkaline, slight amount of albumen, no casts, some pus.

TREATMENT.—Hot-air bath with a drop of croton oil. The croton oil not operating, it was repeated in two hours, but not until several hours did any evacuation take place, and then only an ordinary fecal discharge. Ordered Spir. frumenti four ounces per diem.

May 9th.—Patient somewhat relieved; has passed about sixteen ounces of dark-colored urine containing pus. Had a small evacuation of the bowel this morning. The tympanites is increased, and the patient complains of tenderness over the entire abdomen, more marked in the left lumbar region. There is also slight redness of skin in the left groin and in the left lumbar region. Patient was removed out of the ward to the tent.

May 10th.—About the same. Had a small passage from the bowel yesterday afternoon after injection. Is passing a fair amount of water

with but little difficulty. The distention of abdomen has increased, and the redness of side is more marked.

May 11th.—To-day there is still more tympanites, the redness of side increased. Pulse and temperature normal in the morning, and very slightly elevated at night. An injection of soap-suds was ordered, three pints were thrown into the bowel, and several rather profuse evacuations followed. The matter passed was soft and rather light-colored. There was ordered a poultice of flax-seed meal and mustard over pubis.—Spts. six ounces.

May 12th.—Passed a large amount of urine last night. The left groin and lumbar region are very red, oedematous, and painful. A rubber injection tube being gently pushed up the rectum was stopped at about one foot from the anus, two and a half pints of soap-suds and oil were injected, and the gut would hold no more. An aspirator needle was introduced well in at the location of redness in left lumbar region, and several ounces of dark, watery fluid having a fecal odor were removed. Ordered quinine sulphate gr. V ter in die.

May 13th.—Has some tenesmus of rectum, but very little passes from the gut.

May 14th.—No better. The spot of redness on the left side remains about the same. Percussion over the same space reveals dulness.

3 P.M.—Patient under ether. Present, Drs. Markoe, Sands, Wood, and others. An incision was made, about six inches in length, just above the crest of the ilium of left side, commencing at a point just posterior to middle point of crest of ilium: the knife was brought downward and inward. The integument and superficial fascia being cut through, a large amount of fluid, apparently similar to what had been drawn with the aspirator, gushed out. The cavity being washed out with sol. acid carbolic, 1 to 40, patient was removed to ward 5.

6 P.M.—Recovered from the ether. Pulse 120, and very weak. Temperature $97\frac{3}{4}$ °.

May 15th.—There is considerable discharge from the wound of the same character as that which came from it at first. Urine is passed in small quantities through the urethra, but it is necessary to use a catheter twice or three times a day. Patient is very weak. Poultice applied to abdomen.

May 16th.—No better. The discharge from the wound is quite free, but the odor is less offensive. The cavity is washed twice a day with sol. carbolic acid, 1 to 40. The tympanites is not at all diminished. Still has rectal tenesmus.

May 17th.—Somewhat weaker. At times is not rational. Has diarrhoea and occasional incontinence of feces. The discharges are not altogether watery, as they were yesterday, but more solid and of a clay color. Very little urine is discharged. A thin offensive fluid runs from the wound in considerable quantity. The tympanites still existing, a portion of the gas was let off by an aspirator needle.

May 18th.—Patient delirious part of the time. But very little urine is passed through the urethra. The discharge from the side is the same. At five P. M. was almost pulseless, and at seven P. M., death occurred.

AUTOPSY.—*May 19th.*—Brain not examined. Heart and lungs normal. Liver normal. Peritoneum congested, and coated with a little fibrine. The large intestine, except the rectum, is much distended with gas. On the left side, behind the peritoneum, is a large sloughy cavity in the lumbar and iliac regions, communicating with the external wound. Over this cavity the intestines and all the soft parts are adherent, thickened and infiltrated with pus. It is by these adhesions that the lower end of the colon is constricted. No ulceration of intestines could be found.

The bladder is moderately distended with urine. The mucous membrane is coated with dirty fibrine and pus. There is an ulcer as large as a ten cent piece in the posterior wall on the left side, which opens into a mass of inflamed tissue. No direct communication with the peritoneal cavity, or with the retro-peritoneal abscess. Ureters dilated. Kidneys show evidence of moderate chronic diffuse nephritis.

URETHRA.—A stricture fully one and a half inches in length is found at the bulbous portion of the urethra. The stricture is impermeable except at its very outset for the distance of half an inch. Beneath the mucous membrane of the floor of the stricture is a false passage which commences at the beginning of the stricture anteriorly, emerges, in front of the veru montanum, in the urethral canal, and then pierces the urethral wall again at the side of the veru montanum. It then passes the body of the prostate and makes exit between the prostate anteriorly, and the rectal wall posteriorly, and communicates with the cavity above described.

PROLAPSUS ANI TREATED BY STRETCHING OF THE SPHINCTER.

Edward Maney, aged 34, Ireland, married laborer. Admitted August 26th, 1877.

Patient had never had piles or any previous trouble with the anus. On the evening of the 25th he strained very hard while at stool, and noticed a protrusion at the anus, but was unable to replace it. He went about for an hour or two, and the pain and tenesmus became very annoying. He went to stool, and the difficulty became worse. This lasted until 12 M. on the 26th, when he came to the hospital.

On admission, patient has prolapse of the anus. There is a swelling, the size, shape and appearance of a tomato. It is hard, bluish-black and painful, although less so than a few hours ago.

TREATMENT.—Attempts were made after elevating the pelvis to replace the protrusion, but without success. It was thought best not to apply ice on account of the danger of gangrene. The patient was then etherized, and the sphincter being thoroughly stretched with the thumbs, the part was replaced. Tannic acid was then placed in the rectum together with ce, and the patient ordered an opium pill.

August 27th.—Patient had satisfactory movement of bowel, with no inconvenience. There was no tendency to protrusion.

August 28th.—Discharged, cured.

ST. VINCENT'S HOSPITAL, NEW YORK.

Reported by Dr. Abraham G. Wendell House, Surgeon.

WOUND OF SCROTUM FOLLOWED BY GANGRENE. (SERVICE OF DR. JAS. L. LITTLE.)

R. McC., aged 40, born in Ireland, married. Laborer. Admitted into the hospital February 23, 1877.—Patient states that, while driving a carriage, and making an attempt to turn a corner, one of the wheels of the carriage caught on the rail of the street-car track, and he was thrown off; he fell on his back, with his head in the direction in which the horses were going, in such a position that the hind wheel ran up and struck him in the perineum. He was brought up immediately to this hospital.

On examination, the left testicle was found hanging out from the scrotum; the wound through which it had protruded looked as smooth and even as though it had been made with a sharp scalpel. This wound was situated about one-half inch to the left of the anus, in a line parallel with the raphe.

There were no other wounds or marks of the wheel in any other place that could be found, not as much as a contusion, although he says the wheel passed diagonally over him.

The testicle was but slightly injured, and was replaced within the scrotum, and the wound through which it protruded closed up with three interrupted sutures, cold water dressings were applied, and the scrotum supported with a bandage. There was no hemorrhage, and he did not suffer much pain, but felt very sick.

25th.—He passed a bad night, complaining of more pain, appetite good, tongue clean, pulse 80; temperature 99 1-2. Ordered anodynes to relieve pain, and continue same dressing; he tried to urinate, but found he could not, when the house-surgeon relieved him by the use of the catheter.

26th.—Retention continues; the scrotum looks black and swollen; dressings changed to carbolic acid solution; pulse 85, temperature 100; the left side of the scrotum was lanced, and about one ounce of pus evacuated.

27th.—The scrotum is black, very offensive to the smell; no suppuration at the wound; his bladder has to be relieved yet by the catheter; pulse 85, temperature 100 1-2.

March 1st.—There is some tendency to diarrhoea; line of demarcation well established; he has passed to-day his urine per urethram, not suffering any pain; he is very thirsty, and somewhat restless. Same dressings continued; pulse 88, temperature 101.

2d.—The house surgeon removed all the scrotum up to the line of demarcation. The slough formed about three-fourths of all the scrotum, and when removed, the testicles were left bare, and hanging out. The tunica albuginea testis was sound and healthy. The testicles were covered with a piece of lint, soaked in carbolic acid solution, and drawn

up by the same dressing ; there was a considerable swelling along the spermatic cords, and some redness, and also swelling in the inguinal regions, which were dressed with lead and opium lotion. The parts were ordered to be dressed four times a day, in order to insure cleanliness ; diarrhoea has stopped ; pulse 85, temperature 100.

6th.—Patient doing well, he passes his urine all right ; bowels act normally ; appetite very good ; sleeps well ; the granulations are coming up nicely and look healthy ; pulse 78, temperature 98½.

19th.—His condition to-day is excellent ; the open surface is not more than one-half as large as when the scrotum was first removed ; the outer sides of both testicles are covered over ; the granulations look very healthy. For the last five days we have begun to strap and try to bring together by means of adhesive plaster the edges of the wound. Temperature and pulse have been normal since the 9th.

May 9th.—To-day the patient was discharged entirely well and in good condition. The treatment for the last four weeks consisted only of careful strapping of the scrotum, and it continued to heal kindly and permanently until it was entirely well, with but little deformity of the parts, except a shortening of the scrotum. There was but a small cicatrix left on the centre ; the parts were not tender, and the testicles were movable and normal in their condition. His general condition was exceedingly good and his appetite excellent, and he returned home like a new man.

PERISCOPE.

COLLABORATORS.

Dermatology.—HENRY G. PIFFARD, M.D., Professor of Dermatology in the University of New York.

Diseases of Women and Children.—FRANC P. FOSTER, M.D., Gynecologist to the New York Hospital Out-door Department.

General Surgery.—EDWARD J. BIRMINGHAM, M.D., Surgeon to Bellevue Hospital Out-door Department.

Genito-Urinary Diseases and Syphilis.—ROBERT W. TAYLOR, M.D., Professor of Dermatology in the University of Vermont.

Orthopedic Surgery.—NEWTON M. SHAFFER, M.D., Surgeon to the New York Orthopedic Dispensary and Hospital.

Practical Medicine.—E. DARWIN HUDSON, JR., M.D., Professor of Practice of Medicine, Woman's Medical College, New York.

SUMMARY OF THE THERAPEUTIC EFFECTS OF SALICYLIC ACID.

BY

J. HUGHES BENNETT. (*London Medical Record*, August 15, 1877, p. 308.)

DR. BENNETT, after reviewing the work of M. See on "Salicylic Acid and the Salicylates," in conclusion sums up the therapeutical value of Salicylic Acid.

1. An external antiseptic, it has no advantage over others except its freedom from smell. As an internal disinfectant, it has no apparent effect.
2. As an antipyretic, its properties are doubtful.
3. In acute articular rheumatism its effects are sure and rapid, and a cure in this disease may be confidently prognosed in from two to four days.
4. It greatly relieves chronic rheumatism, diminishes the pain and swelling of the joints, and favors the movement of the limbs, even after years of suffering.
5. In acute and chronic gout its action is the most remarkable, causing the former to disappear in two or three days, moderating and even curing all the symptoms of the latter.
6. It is employed with benefit in neuralgicæ of all kinds.
7. It acts as a sedative in painful affections of the spinal cord.

E. D. H., JR.

ENDOCARDIAL VEGETATIONS AT THE ORIFICE OF THE PULMONARY ARTERY.

BY

DR. DUJARDIN—BEAUMETZ,

Physician to Hospital Saint Antoine. (*L'Union Médicale*, No. 100, August, 1877.)

THE history of endocardial vegetation, thanks to the numerous treatises and communications devoted to the subject, grows daily more complete. And the fact that we have perused the increasing number of works treating of this affection, makes us the more interested in this case of an endocardial vegetation exclusively limited to the sigmoid valves of the pulmonary artery. It is an occurrence, of which I have found no other case in science, notwithstanding the voluminous literature. It is a fact that endocardial vegetation, although frequently found in the left heart, is rarely seen in the right ventricle, and, above all, limited to the pulmonary orifice. Again, the diseases of the orifice are, with the exception of congenital affections, extremely rare in adults. (1) Erichsen has collected, at great pains, nine cases of disease of the pulmonary valve. (2) Wahl has detected, in an acute endocarditis, inflammation of the sigmoid pulmonary valves. (3) Meynat has also made known a case of stenosis of the pulmonary orifice, following a valvular endocarditis. (4) Martin Bernhardt has more recently published an observation of ulcerating endocarditis and of the pulmonary artery. But these are exceptional and rare occurrences, and do not mention endocardial vegetation.

Case.—M. C., a sculptor, aged 21. He entered hospital Saint Antoine, ward Saint Lazare, on May 5, 1877, in a state of extreme feebleness, suffering from palpitation and distress in the precordial region. The patient, though never sick in childhood, had never been strong. He had been addicted to sexual excess and much drink. Three months previously, after one of his habitual debauches, returning home, he was

caught in a drenching rain. The following day he was taken with headache, vomiting and fever. Yet he was able to continue at work for several days, retaining, however, a persistent headache and general *malaïse*. This for three days, at the end of which, he was seized with constricting pains in the chest and labored respiration. On March 27, the affection was rapidly abating. On March 30, a new chill, with elevation of temperature. Nothing new detected in the chest. The heart-sounds were feeble, but distinct at the apex. At the base of the xiphoid appendix there existed a diastolic *souffle* during expiration, and stronger toward the end of expiration.

April 3d.—A chill and fever.

April 14th.—Death.

AUTOPSY.—Pericardium slightly adherent throughout. Heart large and soft; valves of pulmonary artery diseased. The middle valve is fissured, and there are many pendent irregular masses covered by coagula.

E. D. H., JR.

THE OPERATIVE TREATMENT OF GENU-VALGUM.

BY

ALEXANDER OGSTON, M. D. (*Edinburgh Medical Journal, Mar., 1877.*)

A BOY of 18, presenting a bad case of knock-knee of 12 years standing, was admitted into the Aberdeen Infirmary on the 9th of April, 1876. The patient was a robust, strongly muscular lad, well nourished, but, owing to the deformity, short in stature. The deformity was so great, that, when the patient stood erect, the hand could "be passed through between the transposed knees." Mechanical treatment was used for some time, until it became evident that it was useless to pursue it further, and operative measures were then decided upon. On May 17th, 1876, the patient was chloroformed, and the right knee was flexed and the thigh turned outward. A long and strong tenotomy knife (Adams's) was introduced through the skin, $3\frac{1}{2}$ inches above the tip of the internal condyle on the inner side of the thigh, and so far back as to be opposite the ridge of bone running between the linea aspera and the condyle. The blade was then carried "forward, downward and outward," over the front of the femur. When the point of the blade could be felt under the skin, in the groove between the condyles (the normal position of the patella in the flexed position), the cutting edge was pressed against the bone, and the soft parts and periosteum divided in withdrawing the knife. The external wound thus made was one-third of an inch long, and terminated in the cavity of the joint. Adams's saw for subcutaneous division of the neck of the femur was then introduced, and as soon as it was estimated that the condyle was almost entirely separated, and that the saw was approximating the popliteal space, it was withdrawn. The knee was now completely extended, and the limb forcibly straightened laterally; the hands of the operator forming the power, and his knee the fulcrum, by which this part of the operation was accomplished. The undivided por-

tion of the condyle gave way with a snap upon the application of a moderate amount of force, and the limb immediately became straight. The limb was then simply bandaged to a long Liston splint, and the patient placed in the recumbent position. The other limb was similarly operated upon, on June 6th. Lister's antiseptic measures were carefully carried out, and the reaction in each case was almost *nil*. After the first operation the temperature never rose above 99.8°, in the second reaching 100° only. The apparatus was removed after the first operation on the sixteenth day, and passive motion resorted to. Fifteen days after the second operation passive movements were also instituted. There was never any pain, and five weeks after the last operation, the patient was allowed to walk. The movements of the limbs became perfectly normal (the detached condyles uniting perfectly in their acquired positions); and on July 21st, 1876, the patient was discharged, "walking perfectly."—N. M. S.

OBSERVATION ON PERICARDITIS WITH EFFUSION.

BY

MM. MONTEZ AND DUBIEF. (*Lyon Medical*, Aug. 19th, 1877).

THIS case is doubly remarkable, in the first instance, as one of acute articular rheumatism, terminating in death, and secondly, that its essential complication—pericarditis with effusion—attained such proportions that, despite a most careful physical diagnosis, it simulated a coexisting pleurisy.

CASE.—The patient, L. C., a journalist, aged 18, entered the Hotel Dieu, for articular pains of three days' duration, preceded by rigor, and subsequent fever and sweating. The articular inflammation became general, involving the joints of all the fingers and toes. The fever pursued a natural course for ten days, and the symptoms were ameliorated, when slight dyspnoea developed. Auscultation of the heart detected a manifest friction bruit. The dyspnoea not abating for three or four days, attention was directed to the lung. Physical evidences existed sufficient to warrant the diagnosis of pleuritic effusion and pericardial effusion at the same time: namely, dulness over the lower half of the left lung, normal resonance over the superior half—the dulness continued undiminished around to the side. In front, the precordial dulness seemed but little extended beyond its natural limits. On auscultation there was a total absence of vesicular murmur over the same area, and bronchial *souffle* was quite distinct. The normal vocal fremitus had not been altered. The abrupt transition from pleuritic dulness to a very nearly normal resonance left no doubt as to pleurisy. The sounds of the heart were distinctly heard, and its movements definitely perceived by palpation. The pulse was very small and compressible. There was great general debility. On the eighteenth day after admission, occurred intense chills, prostration, and an intercurrent

attack of facial erysipelas, terminating in three days. On the twenty-sixth day he was transferred to another hospital, on account of repairs, and was able to walk without assistance. He now complained of extreme oppression, and two blisters were applied, one over the heart, the other on his back. At the onset of his disease he had taken salicylic acid, in 5-gramme doses, for several days, without benefit, but now was on tonics, alkalies and quinine. Three days further on he was seized with asphyxia. He reclined only on the left side, which betrayed no trace of thoracic distention; his face and extremities were cold and a little cyanosed, his pulse thready and very rapid. The heart-sounds were imperceptible, but the heart-beat distinct upon palpation. The pleural dulness had preserved the same limits as at the onset. On the thirtieth day again examined. The deenbitus was now sometimes dorsal, sometimes lateral. The heart was not displaced, and its pulsations were felt near the left nipple; always the same dulness at the side and behind. In front it reached up to within two fingers of the left clavicle, but did not extend beyond the right border of the sternum. Died.

AUTOPSY.—On removal of the anterior thoracic wall, an immense distention of the pericardium was found completely concealing the left lung. The sac presented a convex surface of 0.16 cent., both vertically and horizontally; it extended in the first direction from the sternal notch to the xiphoid appendix, and in the second from the right border of the sternum to the axillary line. The left lung was in a state of atelectasis, and completely folded back against the spinal column. A few adhesions existed in the left pleura, which contained but little more than a teaspoonful or two of serous fluid. Otherwise the pleura and lungs were healthy and not congested. Firm adhesions were observed between the concave surface of the diaphragm and the corresponding convexity of the liver.

The pericardium formed an enormous sac, having a circumference of 48 centimetres transversely. It was opened, and contained about 600 grammes of a very thin, purulent liquid. The tissues of the pericardial membrane were considerably thinned; in some places reduced as thin as 0.01 centimetre. Its external surface was very vascular, and adherent at many points to the lungs and pleura. Its inner surface was unequal, studded with fibrinous deposits, which could be removed by scraping, and found to be composed of softened fibrillated tissue, breaking down into molecular detritus, and enclosing pus cells, mostly undergoing caseation. The form of the heart was peculiarly modified; it was elongated vertically; its apex was bound to the pericardial wall by a very slender false membrane.

E. D. H., JR.

THE TREATMENT OF ANGULAR CURVATURE OF THE SPINE BY A GUTTA-PERCHA MOULD.

BY *

THOS. JAMES WALKER, M.D. (*The Lancet*, July 7, 1877.)

DR. WALKER gives the following rules for the application of the splint which he uses in his practice:—

1. To insure sufficient strength, employ a sheet of gutta-percha, about one-fourth of an inch thick.—2. Take the following measurements: (a) from sacrum to vertebra prominens; (b) around the back of the pelvis, from a point about an inch anterior to the spine of the ileum to a corresponding point on the opposite side; and (c) around the back of the thorax, from about the situation of the nipple to the corresponding point on the opposite side. Cut the gutta-percha in accordance with these measurements, allowing a margin for its shrinking, and also cut away the top edge, so as to permit of its passing under the arm.—3. To insure an accurate mould, the patient should be stripped, and seated at the edge of a feather bed; three or four strips of flannel, four or five inches wide, and long enough to surround the patient's body and cross in front, are to be arranged like a many-tailed bandage, and so placed, that, when the patient lies down, he should rest upon them. The gutta-percha softened in water (135° F.) should be lifted out of the water on a sheet of wash-leather, and laid carefully (the chamois surface upward) on the strips of flannel. The patient is now placed upon the splint—care being taken to have the splint occupy the position intended. The gutta-percha is then rapidly folded around the hips, waist and thorax, being, while soft, firmly pressed in at the waist. The "many-tailed bandage" is then made to complete the circumference of the body, and bound tightly, especially around the waist.—4. When the splint has hardened, it is removed and modified, as indicated, at the irregular points, and a "front" attached to it with eyelets on each side, so that it may be tightly laced; and to the middle of the top edge of the splint are attached two strong straps which cross over the shoulders and buckle in front.

The utility of the apparatus depends upon its action "as a section of an inverted cone" and its careful adjustment, care being taken to mould the splint accurately to the hips and waist, and to bring its anterior edge beyond the angle of the ribs. It should be always well laced in front.

N. M. S.

STAHL ON THE ANATOMY AND DIAGNOSIS OF OVARIAN TUMORS, DEVELOPED PARTLY WITHIN AND PARTLY WITHOUT THE PERITONEUM.

IN No. 8 of the *Centralblatt für Gynäkologie*, July 7, 1877, p. 145, Dr. Karl Stahl, of Freiburg, relates the following case: On the 25th of May, 1877, Prof. Hegar operated for an ovarian tumor, which, on account of its being developed partly within and partly without the peritoneum, is of importance in regard to the anatomy and diagnosis of such tumors. Before the operation the following points were conspicuous: abdomen unequally distended, most prominent below on the right side; somewhat below the navel a furrow passed across from right to left, over the tumor; at the lower border of the groove a sharply defined transverse band was perceptible to the eye and the touch, whenever the patient strained, coughed, or in any other way brought her abdominal muscles into action; the portion of the tumor situated below

this groove was more tense and firm, and less distinctly fluctuating, whilst the upper portion fluctuated in great, clear waves; on combined examination by the vagina and the rectum, the whole uterus could easily be grasped; from the right angle of the fundus a tense, cord-like membrane extended a finger's length to the tumor.

The diagnosis was, a multilocular cystoma of the right ovary, with a long, broad pedicle. The operation fully confirmed this diagnosis, but revealed unexpected facts in regard to the mode of development of the tumor, which, moreover, explained the peculiar external features. Although numerous cyst-compartments were present, yet the tumor was really made up of two parts—a lower one, of extra-peritoneal, and an upper one of intra-peritoneal development. The former had so raised the anterior fold of the broad ligament that the normal pouch between the broad ligament and the anterior wall of the abdomen was effaced. The tumor had forced itself forward and upward, between the peritoneum and the fascia transversalis, almost to the level of the umbilicus; had extended laterally to the lateral wall of the pelvis, and reached downward nearly to the upper edge of the foramen ischiadicum. The posterior fold of the broad ligament was unaltered. The tumor had not unfolded the median portion of the broad ligament, but between it and the uterus was found a well-defined pedicle, of the character above described. The upper portion of the tumor was wholly intra-peritoneal. It was separated from the lower portion by a pronounced furrow, which was still more sharply defined by a tendinous, thickened, transverse band about a centimetre in breadth. In accordance with these relations, the abdominal cavity, when opened, was found divided into an upper and a lower space, by a sort of diaphragm (the elevated anterior fold of the broad ligament).

A transverse furrow may, indeed, be occasioned by an ordinary cystic tumor, but scarcely one so sharply marked as in this case. More important was the sharp and tense transverse band at the lower part of the groove, on forced straining, *i. e.*, increase of the intra-abdominal pressure. It was due to an impulse exerted upon the intra-peritoneal portion of the tumor, whilst the increased pressure did not alter either the position or the shape of the extra-peritoneal portion shut in between the pelvis and the peritoneum. The greater firmness of the lower portion of the tumor cannot be ascribed to its containing a greater number of small cysts, or to their contents being thicker,—for below, as well as above, there was a large principal cyst, with thin contents,—but to the great distension of the lower cyst-wall by the dense, thickened peritoneum overlying it. Although the greatest carefulness is necessary to make this difference in consistence of value in diagnosis, yet, in conjunction with the transverse furrow, and the sharply-defined band on straining, it may direct attention to the possibility, and even the probability, of such a development, and under certain circumstances, which were wanting in this case, may make the diagnosis sure, by reason of the dense connection of the tumor with the lateral border of the uterus or the lateral wall of the pelvis. Further observations are necessary to show whether the transverse band is a constant feature.

F. P. F.

BENICKE ON THE TREATMENT OF CANCER OF THE UTERUS DURING PREGNANCY.

IN the *Zeitschrift für Geburtshilfe und Gynäkologie*, 1 Band, 2 Heft, 1877, p. 337, Dr. Fritz Benicke gives five cases of cancer of the uterus, in which operative interference was practised during pregnancy. The first case was that of a woman in the seventh month of gestation, with carcinoma of the cervix, affecting chiefly the posterior lip, and traceable within the cervical canal nearly to the os internum. It bled easily on examination. The neoplasm was scooped out, the bleeding being slight during and after the operation. Six days afterward the patient gave birth to a living child, labor being easy, and not attended with undue loss of blood. The child died in the course of a few days. The disease returned in about three months, affecting the vagina, the vaginal portion of the cervix having been destroyed. In the second case, also, the disease was seated chiefly in the posterior lip, with an ulcer on the anterior lip. In the fifth month of pregnancy the neoplasm was removed as thoroughly as possible with scissors and a sharp scoop, and the ulcer of the anterior lip excised. The bleeding was easily checked. The patient remained quiet in bed for eight days, and her pregnancy advanced to term without further hemorrhage or discharge. A living child was born six hours after the pains began. The placenta was said to have been adherent, and was removed by the physician. Eight weeks after delivery the woman complained of a watery, offensive discharge, with slight irregular hemorrhages and pain, which had existed for about three weeks. The vaginal portion of the cervix was found changed into a tumor as large as a small apple, with degeneration of the anterior lip also.

In the third case the vagina was filled with a firm nodular tumor, with a fissured surface, proceeding from the posterior lip of the cervix. The anterior lip and the vaginal walls seemed intact. In the sixth month of gestation the tumor was removed by means of the écraseur, making an opening as large as a bean into Douglas's space. The hemorrhage was high. On the second day severe pain began in the back and abdomen, with high fever. These symptoms continued for nine days, when a dead child was expelled. The labor was normal, and the bleeding slight. On the fifth day after delivery there were two well-marked eclamptic seizures. The urine was highly albuminous, but no casts were discovered. The attacks were not repeated, and five days later the patient was discharged.

In the fourth case the disease was most marked in the posterior lip, forming a tumor about as large as a pigeon's egg. Near the close of pregnancy the mass was removed with scissors and a sharp scoop. Five days afterward a living child was born, after a rapid labor, and scarcely a drop of blood was lost. In about four months the operation was repeated, on account of a return of the disease.

In the fifth case the vaginal portion of the cervix was highly swollen and puffy, with eversion of the lips, so that with the speculum the cervical mucous membrane could be seen of a dusky-red color and granular. A

small piece of it was excised, and shown by the microscope to be undoubtedly carcinomatous. In the fifth month of pregnancy the cervix was amputated with the knife, and the cut surface freely treated with the hot iron. The bleeding was moderate. Labor came on the next day. The placenta, being rather firmly adherent, could not be expressed, and had to be extracted with the hand. A highly exuberant decidua was found on the secundines, and microscopical examination revealed diffuse decidual endometritis. Five months afterward there was slight leucorrhœa, the os externum admitted the finger, the vaginal portion of the cervix was wholly wanting, and the parts looked well on examination with the speculum.

The author urges more frequent resort to removal of the disease during pregnancy, provided it have not yet exceeded the limits of the vaginal portion of the cervix, as it materially ameliorates the result of parturition to both mother and child.

ABOUT BOOKS.

The Practitioner's Reference Book. By Richard J. Dunglison, M. D. 8vo, pp. 341. Philadelphia, Lindsay & Blakiston, 1877.

THE author of this compilation, in his preface, "indulges the hope that it may become an indispensable companion, as a handy-book for everyday consultation." We regret that we cannot see such extraordinary merit in the work as he does; and that he should have descended to inflicting upon the profession such a miserable apology for a standard publication as this work is. In the opening pages we are treated to a translation of the Hippocratic oath, then follow tables of weights and measures, with such information in regard to the solubility of medicines, doses, baths, incompatibles, and prescribing, as can be found in any text-book on *materia medica*. This is followed by some observations on the eruptive fevers, obstetric memoranda, rules for the examination of the urine, toxicology, and dietetic rules; and the closing pages are devoted to directions for holding an autopsy.

These are all subjects that the practitioner should be thoroughly conversant with, and the student should not receive his information from a work of this kind. In the usual college course all these points will be scientifically taught, as his training requires. We think that it is just such *vade mecum* compilations that make our slipshod practitioners, and consider it our duty to frown down all such books, and to discourage the manufacturers of them. We therefore strongly recommend our readers not to waste their money in purchasing this volume. There is no necessity for it, and it is not a work that reflects credit on American medical literature. The publishers have presented it in the usual handsome style of editions emanating from their house.

ERRATUM.

In the last number of the ARCHIVES, page 174, ninth line from top, *hot tar tansy poultice* should read *hot tansy poultice*.

THE HOSPITAL GAZETTE

AND

ARCHIVES OF CLINICAL SURGERY,

A Semi-Monthly Journal of Medicine and Surgery,

EDITED BY

Edward J. Birmingham, M. D., and Frederick A. Lyons, M. D.

VOL. 2, No. 7.

NEW YORK, OCTOBER 15TH, 1877.

WHOLE No. 16.

CONTENTS.

EDITORIAL.

Dr. C. G. Polk and "The Regular Medical Profession." 235

LECTURES.

Clinical Remarks on Vaginismus: By T. Gaillard Thomas, M. D. 227

Clinical Lecture on Chronic Malarial Poisoning: By Alfred L. Loomis, M. D. 239

ORIGINAL ARTICLES.

On a Means of Rendering Vaginal Injections Safe and Efficient (Illustrated): By Frank P. Foster, M. D. 232

HOSPITAL RECORDS.

COLORED HOSPITAL, NEW YORK. REPORTED BY FRANCIS HUBER, M. D.

Ventral Hernia (Illustrated). 238

PERISCOPE.

CAILLER on Alopecia Areata (Dr. Piffard) 241 | the Joints (Dr. Shaffer) 242

KOENNER and APOLANT on Medicinal Rashes (Dr. Piffard) 241 | MARTIN on a New Adhesive Plaster (Dr. Birmingham). 243

KAPOSI on Molluscum Contagiosum (Dr. Piffard) 242 | MASON on Resection for Neuralgia of the Metatarso-Phalangeal Articulation. (Dr. Birmingham). 244

CORRESPONDENCE.

Wheat Phosphates: By C. G. Polk 245

ABOUT BOOKS.

The Ear: Its Anatomy, Physiology and Diseases: By Charles H. Burnett, A. M., M. D. 247

The Physician's Visiting List for 1878: Philadelphia, Lindsay & Blakiston, 1877 247

Transactions of the College of Physicians of Philadelphia for 1877 248

EDITORIAL.

DR. C. G. POLK AND "THE REGULAR MEDICAL PROFESSION."

IT is not often that it devolves upon an editor of a journal to rebuke such unblushing effrontery and falsehood as is presented to our readers in this number. Dr. C. G. Polk, of Philadelphia, sends us a letter and communication, requesting us to publish them as other communications are published, and telling us "that it does not advertise anybody." About the same time that we received this letter from Dr. Polk we

received, in exchange, many medical journals, some of which contain advertisements for the sale of Dr. Polk's "Glycerite of Kephaline." In the *Nashville Journal of Medicine and Surgery*, vol. xx, p. 106, is an article written by Dr. Polk, in which he says: "These three cases tell the great power exerted over tubercular disease by the hypophosphites isolated from brain and wheat"—and imposes the responsibility upon every physician of giving this brain compound—"Glycerite of Kephaline," the same that is advertised by Dr. Polk, not only in the journals, but in circulars scattered before the public.

'We are always glad, in every way, to advertise new and valuable medicines, and we now, to the fullest extent, advertise Dr. Polk's worthless nostrum and his falsehoods, but not in the ignorant manner in which Dr. Polk intended. We have not been imposed upon, as many respectable journals have been, by Dr. Polk's effrontery.

The question has been asked us, "Who is Dr. C. G. Polk, and what is his record?"

"The regular medical profession, to the decision of which I am ever ready to submit" (Polk in *Ph. Medical Times*), will find Dr. Polk's name as Professor of Surgery in the Eclectic Medical College of Pennsylvania, a branch of the American University of Philadelphia; and Professor in the University College of Pharmacy, another branch of the same institution. Last year a friend of ours went to Europe, and on the same vessel was a Frenchman who was taking home with him a diploma from the American University of Philadelphia, constituting him a doctor of medicine. This man said that he had not been in the United States one month. Our friend wrote to the American ambassador at Paris on the subject. The diploma was shown to many of the passengers on the vessel, some of whom reside in this city.

In March, 1875, the *Druggists' Circular* had a short article from Dr. Polk, headed "Tribasic Hypophosphate of Olein and Glycerine," of which he claimed to be the discoverer. This whole article was stolen from Dr. Percy's "Prize Essay of the *Am. Med. Ass.*," on "Phosphorus," published in 1872. In the October number of the same journal he has another article headed "Hypophosphate of Olein," which again is nothing but a plagiarism from Percy's essay. In this article he disclaims ever having heard of Percy's discoveries till the present time. We understand that over ten thousand copies of Dr. Percy's essay on phosphorus were presented to the profession. Is it to be presumed that an *eminent* professor of a college could remain ignorant of so widely-disseminated a book, and one which contained all that the *eminent* professor had written upon or was seeking? This *innocent* denial is evidently very weak; nobody will believe him.

In *New Remedies*, for Nov., 1876, Dr. Polk changes the name, and again borrows from Percy's small pamphlet sent to the profession the name "Protagon," but acknowledges it to be the same substance as that before written on. This he now claims to have used "over a period of eighteen years," thus robbing Churchill of his discovery of the value of hypophosphites in phthisis and kindred diseases.

In all that he has since written, any one who has read Percy's essay can see from whence he derives what little knowledge he possesses. In *The Medical Record* Percy "coins" a new word: "Phosphoid." Polk steals it the next week.

In the *Nashville Journal of Medicine and Surgery*, vol. xx, p. 108, he claims to have used these brain hypophosphites in May, 1859, and says that a doctor of his acquaintance can give his experience with "Glycerite of Kephaline," of Polk's manufactory, in August, 1872. The world-renowned and indefatigable chemist, Thudichum, in 1874, published his researches on the "Chemical Constitution of the Brain;" he gives an elaborate analysis of kephaline, and says that "it is now described for the first time in brain matter." Truly the discoveries of Churchill, of Percy, of Thudichum, are as nothing compared to the discoveries of this eminent professor of a college. He has learned, and taught, how quickly to gain that which other people are long in acquiring, and work diligently for. Discoveries and diplomas are not worth striving for, when they can be got by shorter means.

The chemical blunders and errors made by Dr. Polk in his writings in the journals before us would be worth noticing if made by anybody else, but errors need not degenerate into falsehoods.

We have taken the trouble to get an analysis made of his so-called "Glycerite of Kephaline," and it does not in any manner answer the tests and re-agents given by Thudichum. We have tried it, and it has failed in our hands to do the slightest good.

Dr. Polk has tried dishonestly to use our journal for his own advertisement; we do not intend tamely to submit to such insults, unless it would widely benefit the profession. We learn, upon inquiry amongst our fellow-laborers, that Dr. Polk's articles have been refused admission into several respectable journals: they probably know why.

DR. WM. H. THOMSON's "Lectures on Opium as a Stimulant" will be continued in our next number.

PROF. FRANK H. HAMILTON will hold surgical clinics at Bellevue Hospital on Wednesdays, at 2½ o'clock, during November and December.

LECTURES.

CLINICAL REMARKS ON VAGINISMUS.

Delivered at the College of Physicians and Surgeons, New York,

BY

T. GAILLARD THOMAS, M. D.,
Professor of Obstetrics and Diseases of Women and Children.

THE next patient, gentlemen, is Rebecca G., colored, aged 31, born in the United States, and has been married eleven years. She has never had a child or a miscarriage; in other words, she has been married eleven years,

and has never been pregnant. On questioning her, we find that she has all the symptoms of dyspareunia, coitus never having been accomplished. In every respect the patient looks apparently healthy, but coitus is utterly impossible. Now, this condition is a very important one, as these cases of difficult, painful, and even impossible coition are by no means rare; and at the same time there is no class of cases that yield more satisfactory results to treatment. During the winter I shall show you so many cases that we can do little or nothing for, that it is a real pleasure to show you a case that offers such excellent prospects of cure; it is like coming to an oasis in the desert. Take a patient like the one before us, in whom all the organs seem natural, and I would be willing to guarantee a cure.

From the time of marriage every attempt at coition has caused the patient not only the most intense physical pain, but likewise extreme nervous trepidation, so that the mere mention of the act by her husband produced excitement. The slightest contact with the parts produced pain, and the physician, merely pressing his finger on the parts, caused her to cry out. This is not a mental condition, but is the result of actual physical suffering. In order to make an examination, the patient was placed on her back, the thighs separated, and the labia parted by the fingers. A distinct and perfect hymen was then disclosed.

As I separated the labia she did not complain of any pain; then holding them open, I moistened the pulp of the finger, and laid it on the hymen, when she immediately complained of the most intense pain. I then carried the finger further up, and felt it closely clasped by the muscles of the parts, but pushing into the vagina occasioned suffering of such intense character that I was obliged to discontinue. At the orifice of the urethra I discovered a small urethral caruncle, which is a sort of mucous polypus growing from the membrane of that canal. Sometimes these caruncles cause the difficulty from which this patient suffers, but it is probably not so in this case. If I had put the patient under the influence of ether, there would have been no degree of spasm, and I could have mapped out the uterus completely, but the case is so evident that such a proceeding was not necessary.

This disease has been known for a number of years. Burns, a Scotch surgeon, described it, and considered it a kind of neural trouble, believing that the pudic nerve was particularly concerned. Several French writers have also made observations upon it. Dr. Marion Sims described it admirably, and gave to it the name of Vaginismus, which is so characteristic, and answers so well to the condition, that it has retained this appellation. In these cases the hymen is usually partly broken by attempts at coition, which is prevented by spasm of the muscles at the outlet of the pelvis.

It has been said to be due to a neural condition in which the pudic nerve is involved, but it is probably the result of either one of two conditions: 1st, a very small vaginal entrance, penetration of which throws the muscles into spasm; or, 2d, a hyperesthetic condition of the hymen and surrounding parts, the slightest irritation of which excites violent spasmoidic contractions.

And now a few words in regard to treatment: I repeat it that this patient is entirely curable, and we will rapidly describe the manner of proceeding. First, put the patient on her back, and bring her under the influence of ether. Flex the thighs, separate the labia majora, and give each side in charge of an assistant. Then remove the urethral caruncle completely by a pair of scissors. The hemorrhage is very slight, and will not interfere with the operation. Now catch, with a pair of mouse-toothed forceps, the upper edge of the hymen, and by means of a pair of scissors snip it completely out. We should be careful not to leave a particle behind. Some think that this is not necessary, but the operation gives such excellent results, when performed in this way, that it should always be done. Any hemorrhage can easily be stopped; an arterial twig may be twisted or tied, and oozing can be readily controlled. After the hymen is removed, the entrance to the vagina should be made larger. This may be accomplished in this way: place the fingers of the assistants on each side of the vagina, and put it on the stretch, then make a few small incisions with a bistoury, one downward into the perineal body, and a slight one on each side. When this is finished, take Sims' glass vaginal plug, grease it, and pass it well into the vagina. Then take a strip of adhesive plaster of about two fingers' breadth, and attaching it behind along the sacrum, bring it round and fasten it in front. A small hole should be made in the situation of the urethra, in order to pass the catheter. This is much better than an ordinary bandage, as the fastening is secure, and the plug cannot come out, no matter how the patient moves or tosses in bed. The plug should be kept in for three or four days without removal, and during this time no injection is necessary. At the end of this period the plug may be removed, the vagina syringed out, and the instrument then replaced. After about ten days the patient will be able to pass the plug herself without any trouble, keeping it in five or six hours at a time. Continuing to use it in this way, at the end of four to six weeks the patient can be without it entirely, and will be well of all her former difficulty. I have performed this operation a great many times, and I have yet to meet with the first case of failure.

CLINICAL LECTURE ON CHRONIC MALARIAL POISONING

Delivered at the University Medical College, New York,

BY

ALFRED L. LOOMIS, M. D., Professor of Pathology and Practice of Medicine.

GENTLEMEN:—This patient, who states that he is 35 years old, says he has been sick since last April; that at that time, after an unusual exposure to wet and cold, he was taken suddenly with a severe pain in the right side, which compelled him to go to bed. He had a hacking cough with little or no expectoration; he was confined to his bed about two weeks before he expectorated anything after coughing, and then the sputa consisted of a "greyish slime." He was unable to leave his house for about a month and a half. Since that time he has not felt well. Though

his cough has not troubled him, and he has not lost much flesh, nevertheless he has felt weak and unable to work, being fatigued after slight exertion.

The first question that arises in connection with this history is, What was the nature of this attack? Pain coming on suddenly in one side always leads one to pleurisy. It is true that in pneumonia we have pain in the affected side, but not until the pleura becomes involved. In bronchitis, patients will have pain in the chest, but the pain is located behind the sternum. When pain in the chest is severe, and localized on one side, if you exclude chronic affections, such as intercostal neuralgia, pleurodynia, aneurism, and the like, you are led to pleurisy as its cause; without a physical examination of the chest you will be unable to remove the doubt. We will, therefore, submit the chest of this patient to a physical examination, before proceeding with his history. On inspection we do not notice much, except a slight shrinking on the right side. We perceive that the right clavicle is a little more prominent than the left. The chest, however, expands well and evenly on both sides. You notice that the right shoulder is a little lower than the left, but this is a very common occurrence, and usually depends on slight lateral curvature of the spine. Both scapulæ move well, and there is not much difference between the motion on the two sides. Now the free movement of the scapulæ, the absence of retraction on either side, and a free expansion of the chest on both sides, lead us to conclude that there is no extensive disease of the lungs or pleura. We can assert this from inspection alone. On palpation, we find the vocal fremitus to be feeble, but this may be due to the naturally high pitch of the patient's voice. The tones are not very sonorous, and this fact would account for the alteration from the ordinary fremitus. On comparing the two sides, we do not find any difference. On percussion, we find very fair resonance, both anteriorly and posteriorly, and little or no difference between the two sides. On auscultation the vesicular murmur is heard all over the chest, though, perhaps, it is not quite as intense in the right infra scapular region as in the left. There is a slight pleuritic friction sound also present in the right infra scapular region. Now the question comes, Is it possible to have a pleuritic friction sound after so long a time has elapsed since the primary attack of pleurisy? This question must be answered in the affirmative, as we may often hear a pleuritic friction sound a year or more after the primary attack. The vesicular breathing is less intense on the right side, because there is probably some thickening of the pleura, and this thickening interferes with the free expansion of the pulmonary tissue in the vicinity. Except these two minor points, the physical examination is entirely negative.

Our physical examination of the chest, therefore, excludes any active or progressive disease of the lungs. Still this man is sick, and unable to work. His pulse is weak and, on counting, is found to vary from 120 to 130. Let us proceed, then, to a further investigation of his case.

On percussion over the liver, we find it to be of normal size. Over the spleen we find a considerably increased area of dulness. When we press firmly down over the abnormal area of dulness, we feel a solid mass much

below the normal boundary of the spleen, and it gives the patient pain when we press firmly on it. This leads us to the conclusion that he has an enlarged and tender spleen.

The enlarged spleen starts us, then, in another direction, and we must go back and enter more fully into his history from another starting-point. He tells us that he lives on Long Island, near Flushing, and has lived there for fourteen or fifteen years. This district, I need not tell you, is one of the worst in the vicinity of New York for the development of malarial diseases. The patient says he had a severe and prolonged attack of chills and fever three years ago, but has had no regular malarial paroxysms since.

We must conclude, I think, that the enlargement of the spleen is due to malarial infection; and a condition of chronic malarial infection would be ample cause for his weakness, inability to work, and disturbed circulation. As you notice, his surface is pale, and his face has somewhat of a yellowish hue. I think, then, we can now easily sum up his case: We have here a man suffering from a chronic malarial infection, a very common condition, and one which gives rise to a series of symptoms which cannot be enumerated or tabulated, so numerous and so various are they, and appearing under so many different forms. We may have neuralgias of various forms, that may or may not be periodical in their occurrence. We may have various dyspeptic symptoms, that cannot be relieved by the ordinary dyspeptic remedies; various forms of headache, that are often treated as grave forms of cerebral disease. In some there is confusion of mind, a staggering gait, loss of power in some portion of the body—the mental faculties may become impaired; I have known the subjects of chronic malarial poisoning, in the middle of an argument or speech, to suddenly lose the thread of their discourse, and go on talking for half an hour perfectly unconscious of what they were saying. Other persons are affected with a sort of inertia, which renders it impossible for them to do work of any kind. They are not sick enough to go to bed, but too ill and habitually tired to perform anything requiring the least exertion. Some, again, get short of breath, have a rapid, weak, irregular pulse, pass sleepless nights, and so I might go on for an hour, and still be unable to detail to you all the symptoms that chronic malarial infection may give rise to.

In all cases of chronic malarial infection we have important changes in the constitution of the blood. It contains free pigment, becomes thin, deficient in red globules, and no longer retains its normal, nutritive power. In consequence of this the whole system is affected, and we get secondary changes in all the organs, always, however, attended by primary enlargement of the spleen. In order that a person should become thus infected, it is not necessary that he should have distinct intermittent paroxysms. It is quite sufficient that he resides for a long time in a malarial district, as he is constantly exposed to the poison. If this patient were to move away from where he is at present living, to a place free from the malarial emanations, he probably would have two or three severe malarial paroxysms, after which it is far more amenable to treatment than

now. Quinine or arsenic will not relieve him unless he can remove from the malarial district in which he now resides. Place him in a non-malarious locality, and then quinine will have its controlling power over the disease. Large doses of quinine will do more harm than good, so long as this patient remains in a malarious district. If the disease progresses without even temporary relief being obtained, splenic enlargement will increase, the liver will become involved, and finally general dropsy will terminate the case. The change of residence in this patient's case must be immediate.

This case, gentlemen, is very instructive, for it shows how we are sometimes compelled to arrive at a diagnosis by exclusion.

◆◆◆◆◆

ORIGINAL ARTICLES.

ON A MEANS OF RENDERING VAGINAL INJECTIONS
SAFE AND EFFICIENT.

(Read before the Medical Society of the State of New York, June 20th, 1877.)

BY

FRANK P. FOSTER, M. D.,

Physician for Diseases of Women to the Out-Patient Department of the New York Hospital.

THE great benefit which the proper employment of vaginal injections is capable of affording in the treatment of many diseases of the pelvic contents in women, and the frequency with which they are resorted to, render it highly desirable that their administration should be so conducted as to deprive them of all liability to do harm.

I presume that almost every physician either has himself met with unpleasant, if not alarming, results from the use of vaginal injections, or is aware of instances recorded by others; hence I consider it unnecessary to prove the proposition that such injections, as usually employed, are not wholly free from danger. I shall, however, mention a case which was recently reported to the Dublin Obstetrical Society by Dr. T. More Madden, * for not only does it well illustrate the subject, but some of the points brought out in the discussion of the case are such as I wish to comment upon particularly.

Dr. Madden estimates that at the present time vaginal injections are used in nine-tenths of the diseases peculiar to women. A healthy young woman, whom he had delivered with forceps five weeks before, and whose convalescence presented nothing remarkable, called on him, complaining of pain in the back, a profuse yellow leucorrhœal discharge, and a distressing bearing-down sensation. The vagina was congested, the os uteri patulous, and the uterus slightly prolapsed and enlarged. An astringent vaginal injection was ordered. A few nights afterward intense uterine colic came on during the use of the injection. Two hours later she was found cold, almost pulseless, and apparently semi-moribund. After the use of stimulants, sinapisms over the heart, etc., the more urgent symptoms were abated, warmth was restored to the limbs, the pulse became apparent at the wrist, and the severe uterine pain was for the time considerably relieved. The next morning she was still in a

* *Obstetrical Journal of Great Britain and Ireland*, vol. iii, p. 56.

state of extreme prostration, and again suffering from frequent paroxysms of violent uterine pain, and almost continual retching, with great tenderness over the abdomen, and especially over the uterus, which was as large and hard as it should be immediately after delivery. Her pulse was 140, and so weak that it could hardly be counted; her respiration was sighing, her countenance pale and anxious, and the skin cold and clammy. Poultices and anodyne stupes were applied to the abdomen; hydrocyanic acid draughts were given to allay the retching, and her strength was supported by enemata of brandy and beef-tea, with small doses of liquor opii. The same evening the incessant sickness and uterine pain continued. As even bits of ice were immediately rejected, she was ordered to take nothing whatever by the mouth; a drop of hydrocyanic acid was added to each enema a few leeches were applied over the seat of pain, and morphia was injected under the skin.

On the eighth day after the injection had been ordered the pain had, in great measure, subsided, but there was yet considerable tenderness over the uterus, which continued perceptibly swollen. The pulse was 140, weak and compressible; tongue dry and furred; decubitus dorsal, and sunk down to the back of the bed; and she was still suffering much from the constant nausea and dry retching. The next day she was seen by Dr. McClintock, who confirmed Dr. Madden's view of the case. She was able to sit up for the first time on the twentieth day, and was soon valescent.

Dr. Madden remarks that the uterine colic and subsequent metrorrhagia followed so immediately on the use of the vaginal syringe as to leave no room for doubt of their having been caused by the fluid being injected through the patulous os into the uterus, and probably, also, by some of it passing through an enlarged or dilated Fallopian tube into the peritoneal cavity.

In the discussion upon Dr. Madden's paper, Dr. Atthill expressed the opinion that the occurrence of uterine colic following the injection of fluid by the syringe was not very rare. He had seen three cases in his own practice. In one case it followed the injection of a few drops of glycerine into the cavity of the uterus; in another, a weak solution of borax had been injected into the vagina; and in another, only tepid water had been used. He advised that the central aperture of the nozzle be closed, to prevent the accidental entrance of fluid into the uterus. Dr. Kidd concurred in this advice, and in the opinion that uterine colic, following vaginal injection, was not an uncommon event. "Patients," said he, "will use vaginal injections for weeks without suffering any inconvenience, and then it sometimes happened that they got colic. As a rule, it came on almost while the injection was being used, but sometimes it would not come on for a considerable interval. * * * So far as his experience went, these cases occurred principally when the os was patulous, and there was marked retroflexion of the uterus."

Dr. McClintock remarked: "They could not speak positively as to the cause of the alarming symptoms described by Dr. Madden. They never could know whether any of the fluid went into the cavity of the uterus or

not. All they could say was, that such was possible. * * * Hitherto he had been in the habit of telling his patients that they might use the syringe freely, and that it could not do any possible harm; but now he saw such a direction would not be always a safe one."

My friend, Dr. P. F. Mundé, in his "Report on the Progress of Gynecology during the year 1875," * after quoting this case, concurs with Dr. Madden's condemnation of the indiscriminate use of the ordinary vaginal syringe, and with his advice that in its place a vaginal irrigator should be used, from which a steady, gentle stream descends. "Care should be taken," says Dr. Mundé, "that the nozzle of the syringe should not possess a central aperture, and if one is already present, it should be plugged. Patients have repeatedly returned, telling me that the single vaginal injection with a Davidson's syringe, of a weak solution of tannin, had caused them such severe abdominal pain as to confine them to their beds for several days. The observation that these complaints were principally made by women with naturally wide external uterine orifices, or in whom bilateral division of the cervix had been performed a short time previously, or whose cervical canals I was dilating with Ellinger's or Peaslee's dilators, speedily led me to surmise the true cause of the sudden pain, and to recommend less force in the injection, or the use of a fountain syringe."

Now, all these comments upon Dr. Madden's case point to but one source of danger, namely, the entrance of the actual stream into the uterus; and they would lead us to infer that this is the only danger, and that it can be obviated by so simple a device as the use of a nozzle without a central aperture. This hint is coupled with the advice to make the stream less forcible. If the stream from the side of a nozzle is not liable to enter the uterus, why use less force? The advice to do so shows, I think, that no great confidence is felt that the central aperture is the sole source of danger. In point of fact, a stream from the side of a nozzle may enter the uterus, since the axis of the uterus usually forms more or less of an angle with that of the vagina. The absence of a central aperture is, therefore, not an absolute guarantee against danger, even if the direct entrance of the jet into the uterus were the only thing to be feared.

I believe, however, that an injection may enter the uterus by reason of spasm of the vagina, or of the muscles situated about it, in this wise: If an ordinary nozzle be used, it is apt to be grasped spasmodically by the vulvar ring; the outflow of the injection is thus impeded, or altogether prevented, the vagina is distended, and spasm in its deeper parts is induced, which may cause a portion of the fluid to enter the uterus; or this distension may prove injurious in other ways, for instance, by stretching and straining inflamed parts about the vagina, or the diseased walls of the canal itself, as suggested by Ebell.†

Moderate degrees of distension of the vagina by injections are very common, as any one may satisfy himself by observing how frequently a portion of the liquid remains imprisoned in the vagina after the withdrawal of the nozzle. I presume that, as a general thing, this does no harm; but

* "American Journal of Obstetrics," vol. ix, p. 167.

† *Zeitschrift für Geburtshütse und Frauenkrankheiten*, 1 Bd., p. 598.

what if, during the continuance of the spasmodic closure of the orifice, the deeper parts of the canal should become affected with spasm? The water must then be subjected to considerable pressure, and it is quite likely that some of it would be driven into the uterus. That such deep-seated spasm may take place, and that it may be very forcible, will be seen, from the following case, related by Hildebrandt: * "A young woman of an erotic nature, and in a state of high nervous excitability, who was undergoing treatment for uterine disease, allowed the marital approach. The husband gave the following account of what happened on a certain occasion, when his wife was feeling less indisposed than usual, but very much agitated: At about the moment that he considered the coitus, which was in other respects normal, as at an end, he suddenly felt himself, or rather his glans, held fast, bound and imprisoned deep in the vagina at a time when the whole member was occupying that canal. All attempts at release proved fruitless. Forceable attempts gave severe pain to either spouse, and at last, bathed in sweat, as the result of agitation, fear, and fruitless endeavors, they were obliged to resign themselves to patient waiting. How many minutes this lasted he could not say, but the duration of his imprisonment seemed to him without limit; then the impediment gave way of itself, and he was free." Hildebrandt attributes the occurrence to spasm of the levator ani. On examining the woman, some weeks afterward, he found no abnormality of the genital organs, except moderate anteflexion of an hypertrophied uterus.

About a year ago I published† a description of the "vaginal douche," here shown, an appliance which I had devised for the purpose, among others, of obviating what I conceived to be the sources of danger in vaginal injections; and I have now been thus particular to state my views upon the subject, because I have noticed that several gentlemen have been using the instrument in question, after having substituted the ordinary nozzle (but without a central aperture) for the one which I described. In so doing they have not impaired the efficiency or convenience of the instrument, but they have, as I think, sacrificed some of those features in it which were designed to render it incapable of doing harm. To illustrate my meaning, I may be allowed to describe the douche here, notwithstanding the fact that a description of it has already been published.

An elliptical cup of soft rubber, large enough to cover the vulva, is pierced at its apex by the delivery-pipe of a Davidson's syringe, as shown in the accompanying cut (fig. 1). To the extremity of this flexible delivery-pipe, inside the cup, the *nozzle*, which is a U-shaped tube of hard rubber, is attached by one of its arms. In this arm, near the bend, and looking toward the opposite (free) arm, is a single aperture through which the injection escapes, the stream striking against the free arm of the tube, which is closed at its extremity, so that by no possibility can the stream directly enter the uterus, nor can the vagina suffer undue distension, since the two arms of the U-shaped nozzle maintain constant patency of the vaginal outlet, and consequently insure the free egress of fluid, while at the same time they hold the vaginal walls apart.

* *Archiv für Gynäkologie*, iii, p. 221.

† *Medical Record*, vol. xi, p. 597.

sufficiently to insure the subjection of the whole mucous lining of the canal to contact with the injection. To accomplish this last purpose, the size of the nozzle, *i. e.*, its length, and the distance between its arms, should conform to the dimensions of the vagina in the particular patient who is to make use of it.

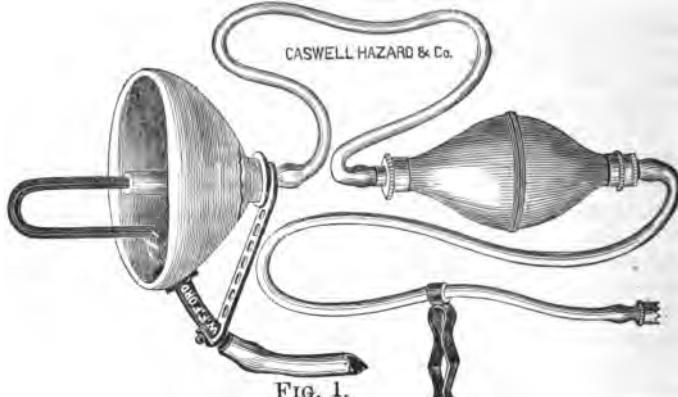


FIG. 1.

The patient lying on her back, with the hips somewhat raised by means of a pad or hard cushion, the vessel holding the injection is placed in a chair or on a table by the side of the bed. The suction-pipe of the syringe having been made fast to the vessel by means of the clip, a few syringe-fuls of the fluid are first passed through the instrument, in order to drive out the air contained in it. The nozzle, previously oiled, is then to be introduced into the vagina, when the cup will be found to cover the vulva. The lower part of the cup is to be held gently, but firmly and evenly, against the perineum, but *the upper edge of the cup should not be in contact with the patient's person*, for in that case, should the current become obstructed in the out-flow pipe (which is attached to the lower part of the cup), distension of the vagina might take place; whereas, if these directions be followed, the only effect of such obstruction would be that the injection would overflow at the upper part of the cup. The injection is effected by working the syringe in the ordinary way; but, should a syphon-action be preferred, it is only necessary to raise the vessel containing the injection above the level of the vulva, when, after once starting the stream, it will be found to continue of itself, without the necessity of working the syringe. The injection may be kept up *ad libitum*, as the out-flow pipe conducts the fluid from the vagina into a vessel placed on the floor by the side of the bed for the purpose. Care should be taken that *every part* of the out-flow pipe shall be on a lower level than the lower portion of the rubber cup, and that it be not pressed upon anywhere, or bent at too sharp an angle, otherwise the fluid may flow over the top of the cup, and soil the bed.

The cup, it will be seen, is an important part of the arrangement,

since it enables a prolonged injection to be given to the patient in the recumbent posture (conditions which greatly conduce to the efficiency of vaginal injections), without the disagreeable necessity of using a bed-pan, or the services of a nurse. Important as is the cup, however, the essential feature of the instrument is the nozzle, as being the part which secures against danger. I am so thoroughly impressed with the truth of this statement that, in the case of patients who cannot afford to buy the instrument as a whole, I am in the habit of advising them to get the nozzle, and attach it to the Davidson syringe. On account of the flexible attachment of the nozzle to the cup, its insertion does not give pain, even immediately after confinement, or when the parts are lacerated or inflamed; and, for the same reason, it is perfectly efficient in cases of ruptured perinæum, even if the laceration extend into the rectum—but in that case the lower border of the cup must be held behind the anus.

Quite recently I have contrived an auxiliary appliance to maintain the contact of the cup with the person, thus doing away with the fatigue of keeping up pressure with the hand during a prolonged injection. This is here shown in section (fig. 2). It consists of two cylinders, one of



CASWELL HAZARD & CO.

Fig 2. W.F. FORD.

which plays within the other, after the manner of a piston and barrel, thus forming a rod which is capable of being lengthened or shortened, so as to be eight or eleven inches long, or of any intermediate length. This is effected by a false bottom, which can be fixed in various positions by means of a set-screw passing through a slit in the outer cylinder. Upon this false bottom rests a spiral spring, which tends to elongate the rod. It is used in this way: the lower limbs resting on a pillow placed under the hams, and the douche having been applied in the manner already specified, the pointed end of the rod is inserted into one of a series of holes in a metallic bar which is attached to the cup (see fig. 1), while the broad end rests against the lower part of the pillow. By means of the set-screw the length of the rod is now adjusted in accordance with the degree of pressure which may be required, and with the distance from the cup to the pillow. Of the holes in the metallic bar, it is best to make use of such a one (generally quite near the out-flow pipe) as will cause the pressure to be exerted chiefly upon the lower border of the cup. As a matter of course, the axis of the rod should not deviate laterally from that of the body.

HOSPITAL RECORDS.

COLORED HOSPITAL, NEW YORK.

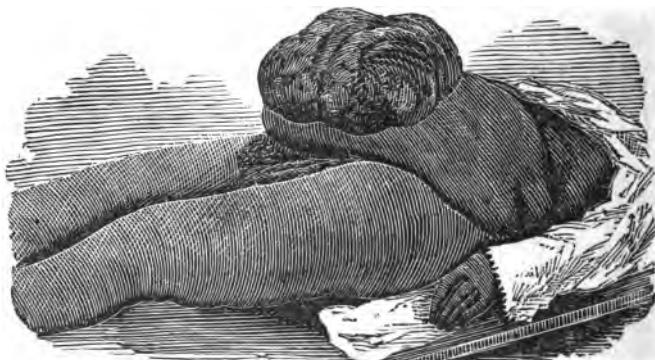
Reported by Dr. FRANCIS HUBER, House Physician.

VENTRAL HERNIA. (SERVICE OF DR. SAMUEL WHITALL.)

SOPHIA F., 71.—Widow.—Delaware.—No relevant family history.

From infancy has had a slight ventral hernia, which remained of small size until she attained the age of 38. About this time she became pregnant, and at full term was delivered, after being in labor five days. The hernia has since gradually increased. The patient at different times has suffered from malarial fever; had the "ague-cake" at 16. She has repeatedly been dropsical; at these times she would be very drowsy; would even go to sleep standing up. With exception of slight edema of lower extremities in spring, and occasional symptoms of the same intestinal obstruction, accompanied by great pain, she has been well since 1853. These attacks invariably yielded to opiates and cathartics. For some time she has been compelled to micturate very frequently.

So extremely sensitive was she to having her person exposed, that a thorough examination of the hernial tumor was impracticable. A large lobulated protrusion existed in the median line, a short distance above the umbilicus. Through the greatly attenuated abdominal walls, the vermicular movements of the intestines could be very distinctly perceived. With each contraction of the gut, minute linear indentations of the integument could be seen travelling across the surface of the mass in a very rhythmical manner. So plainly marked was the contour of the intestine in the most superficial portion, that no difficulty was experienced in recognizing it as the colon.



March 21st.—With exception of attacks previously mentioned, the patient has, for the last seven years, been able to be about, and to attend to her various duties.

On the night of the 18th the patient was seized with great pain in the head, followed by chill and severe pain in lumbar regions. Has had a slight cough for a fortnight.

At present complains of severe headache and lumbar pains; tongue is heavily coated. Pulse 80 and irregular, respiration 28 temperature 102°.

Appetite is poor; bowels constipated; has been vomiting; slight edema of legs; heart's action very irregular; no murmurs audible.

Lungs, as far as examined, healthy, though a careful exploration is impossible, in consequence of the excessive adipose development. Ordered, hydrarg. chlor. mite, grains 15; pulv. rhei, grains 10; also pot. iod. grains 5, every three hours.

March 22d.—Cathartic acted well; feces and urine passed in bed; patient very weak; no appetite; no delirium, convulsions or coma.

March 23d.—Died this day, 11.30 P. M. Conscious to the last.

Autopsy 13 hrs. P. M. Rigor mortis slight. Measurements:—Greatest circumference of abdomen above umbilicus, over the centre of tumor, $57\frac{1}{2}$ inches; of hernial sac, at base, 34 inches.

Vertical measurement of tumor over centre, 18 inches; transverse measurement, $18\frac{1}{2}$ inches.

Girth of abdomen above the tumor, 43 inches; around the hips, 53 inches.

Circumference of thorax, at fourth rib, $44\frac{1}{2}$ inches. Length of body, 5 feet 5 inches.

Thickness of fat over abdominal wall, 3 inches; over the trochanters nearly 5 inches.

Weight of organs:—Right lung, 18 ounces; left lung, $12\frac{1}{2}$ ounces; right kidney, $5\frac{1}{2}$ ounces; left kidney, 6 ounces; brain, 45 ounces; heart, $16\frac{1}{2}$ ounces; liver, 55 ounces; spleen, $3\frac{1}{2}$ ounces; uterus, $4\frac{1}{2}$ ounces.

Brain greatly congested; puncta vasculosa well marked; small excess of serum underneath, and slight opacities in arachnoid. Arteries at base contained scattered points of atheroma. Lungs—slight adhesions over left, none over right. Hypostatic congestion and considerable pigment. Heart enlarged, very flabby and muscular; structure pale. Excess of fat, especially over right ventricle, and along the course of the coronary arteries. Cavities somewhat dilated, and contained flabby dark clots, most abundant on right side. Endocardium and walls of vessels deeply stained by hematin; valves not abnormal.

Liver presented a beautiful specimen of bronze degeneration. The gall bladder contained a very small amount of tenacious, dark-brown bile, and a number of calculi of various sizes, from a pin's head to a chestnut. They were mottled, pale yellow and dark, and presented numerous facets. One calculus of small size was found in the cystic duct, which was considerably distended.

Spleen normal in size, flabby, and of a dark color.

Kidneys excessively flabby, and in an advanced stage of granular and fatty degeneration. Capsule not at all adherent. Renal veins, with their ramifications in the organ, were greatly engorged. On section the pyramids and pelvis were deeply congested, while the cortex was pale and fatty.

In the uterus several small interstitial fibroids were discovered. A soft, elongated polypus, projecting downward, and tapering to a point near the os, was attached to the fundus by quite a broad base. The organ itself was very soft in structure. A careful examination of the hernial tumor revealed the following condition: externally the mass was divided into three main protuberances; these, again, were more or less lobulated, corresponding to the intestinal pouches.

While the integument over the abdomen generally was of normal thickness, and the adipose tissue of excessive depth, the portion over the hernial protrusion was exceedingly thin. The umbilicus was found at the lower margin of the base of the sac, and was completely hidden from view by the overhanging mass. Upon section, the skin over the hernia was found to have no intervening structure between it and the gut, excepting a few slight adhesions. The contents were arranged in a very complex and peculiar manner. Occupying the uppermost pouch was found a portion of the transverse colon (near the splenic knuckle), greatly elongated and distended; to this the great omentum was attached. This mass was separated from another pouch by a partition of false membrane, having a falciform border. In this pouch, situated below and to right of former, were contained the caput coli, ascending, and part of transverse colon. The third pouch, forming the lower portion of the mass, to the left, held the ileum and a portion of the jejunum. It was separated from the other pouches by a slight but very firm fibrous constriction.

In addition to these pouches numerous smaller ones were discovered, separated from one another by similar fibrous partitions.

The main neck of these pouches was surrounded by a continuous, nearly circular fibrous band, of almost cartilaginous hardness.

The mesentery and meso-colon were greatly elongated, and contained an excess of fat. The appendices epiploicæ were also very numerous and large. The pyloric orifice of the stomach and the duodenum were drawn downward, considerably out of position.

The contents of the pouches containing the colon were firmly bound to the parietes by adhesions. The pouches containing the small intestines appeared to be free from them.

MICROSCOPY.—The polypoid growth consisted of very delicate fibres, small oval nuclei, and considerable fat.

The liver cells were exceedingly small and few in number. Some contained minute granules of fat, others brown pigmentary matter, a great excess of free oil, a few fat crystals, showing a tendency to form acicular-shaped bodies.

No normal kidney structure discoverable; a great abundance of granular and fatty matter was found.

The tufts were shrunken and capsule thickened; tubes were denuded of epithelium, and contained granular and fatty matter.

Heart was not only the seat of adipose degeneration, but the fibres contained fat globules.

Over the tumor the dermal tissue was replaced by fibrous structures.

PERISCOPE.

COLLABORATORS.

Dermatology.—HENRY G. PIFFARD, M.D., Professor of Dermatology in the University of New York.
Diseases of Women and Children.—FRANK P. FOSTER, M.D., Gynaecologist to the New York Hospital Out-door Department.
General Surgery.—EDWARD J. BIRMINGHAM, M.D., Surgeon to Bellevue Hospital Out-door Department.
Genito-Urinary Diseases and Syphilis.—ROBERT W. TAYLOR, M.D., Professor of Dermatology in the University of Vermont.
Orthopedic Surgery.—NEWTON M. SHAFFER, M.D., Surgeon to the New York Orthopedic Dispensary and Hospital.
Practical Medicine.—E. DARWIN HUDSON, JR., M.D., Professor of Practice of Medicine, Woman's Medical College, New York.

ALOPECIA AREATA.

BY
LAILLER. (*Le Progrès Medical*, Nos. 12 and 13, 1877.)

THE author is unwilling to express himself confidently as to the nature of this affection, and says that neither the parasitic nor the neurotic theory of the disease is supported by sufficient evidence to warrant the definite acceptance of either. In the way of treatment he recommends that the scalp (if affected) be shaved twice a week, the beard daily, and that the following be well rubbed in night and morning.

Grammes.

R	Balsam of Fioraventi,			
	Tincture of Camphor,			
	Tincture of Pyrethrum,	aa		100
	Ammonia Water,			6
	or			
R	Balsam of Fioraventi,			
	Tincture of Camphor,	aa		100.
	Tincture of Cantharides,			25 to 50.

Balsam of Fioraventi is a mixture of several stimulating and irritant ingredients, and its formula will be found in the French *Pharmacopœia*

H. G. P.

MEDICINAL RASHES.

BY
KOEBNER, V. HEUSINGER AND APOLANT. (*Berl. Klin. Wochensh.*, 1877, Nos. 22, 23, 25.

WE here find observations concerning the occurrence of various eruptions induced by the use of certain medicines. Koebner has encountered simple hyperæmia and inflammations, usually under the form of urticaria, exudative erythema, phlyctenæ, acute furuncles, etc. Beside the well-known mercurial, iodic, and bromic eruptions, exanthems have been noticed to follow the administration of quinine, morphine, strychnine, digitalis and chloral hydrate, and other drugs. As these eruptions may closely simulate idiopathic affections of the skin, great care should be exercised in diagnosis.

H. G. P.

MOLLUSCUM CONTAGIOSUM.

BY

KAPOSI. (*Viertelj. Schrift f. Derm. u. Syph.*, 1877, 3 H.)

IN an extended article the writer comes to the conclusion that the disease is not contagious, and that its anatomical seat is in the sebaceous glands. He thinks, therefore, that its name should be changed to M. Sebaceum. Vidal (*Le Progres Medical*, 1877) likewise expresses the opinion that the disease is situated in the sebaceous glands. These conclusions are at variance with those of Retzius, Boeck, Lukomsky and Piffard, who, from actual microscopical examination of thin sections of the tumors, unhesitatingly locate the affection in the rete malpighii, and not in the glands.

H. G. P.

MUSCULAR ATROPHY IN AFFECTIONS OF THE JOINTS.

(*The Lancet*, September 22d, 1877.)

IN a memoir just published (H. B. Bailleure), M. Valtat, of Paris, discusses in an exhaustive manner the subject of muscular wasting, in connection with articular disease. He points out that in all joint affections, even in acute arthritis, which gets well in a few days, the muscles in the neighborhood of the joint, and also those that are at some distance from it, become weak and rapidly atrophy. As a rule, the extensors are the first to fail, *e. g.*, the triceps. cruris in disease of the knee, or the deltoid in shoulder affections; and while other muscles of the limb may be wasted, the atrophy is most marked in those which act directly upon the joint. The wasting commences very soon after the first symptoms of joint affection are shown, so that by the eighth to the twelfth day after the onset of the arthritis, there will be a marked diminution in the size of the limb. This wasting cannot arise, the author thinks, from simple inaction, or forced disuse, because of its early appearance, and the frequency with which it persists after the joint symptoms have subsided. The experimental investigations of the author, made in M. Vulpian's laboratory, lead to the same conclusion. He excited artificial inflammation in the joints of animals (Guinea-pigs and dogs) by means of the injection of irritants, etc., and marked effects upon the muscles were observed within a few days of the operation, and he found all the evidences of atrophy in the affected muscles, which were diminished markedly in volume and weight. The atrophy is not due to fatty degeneration, but simply to wasting of the muscular tissue, leading to paralysis, which can be cured by means of electricity. The author's conclusion may be summed up as follows: 1st. That the majority of joint diseases markedly influence the nutrition of the muscular system. 2d. That, in the majority of the various kinds

of arthritis, from the very onset of the disease, there supervenes considerable atrophy, and more or less marked paralysis of certain muscles, particularly those acting on the affected joint. 3d. This atrophy cannot be attributed to functional inactivity, nor to an inflammation of the muscles, nerves or spinal cord, but is produced most likely in a reflex manner. 4th. It usually increases as long as the articular disease lasts, and although occasionally it may be transitory, in an immense majority of cases it persists after the cure of the arthritis, and then forms the chief hindrance to the restoration of the movement in the limb. 5th. Its duration is very long, generally, and it only has a slight tendency to spontaneous cure. 6th. These atrophic lesions are readily and rapidly cured by the use of feeble continuous currents, and, better still, by the combined use of galvanism and faradaism.

[In the ARCHIVES OF CLINICAL SURGERY, for June, 1877, in the article "On Reflex Muscular Contraction and Atrophy in Joint Disease," etc., I call attention to, and demonstrate from a clinical standpoint, the facts which M. Valtat has experimentally proven. In the article referred to, the following sentence appears: "I may state, as a result of my clinical observations on this point, that the force and persistency of the contraction, the muscles affected by it, the degree of muscular atrophy, and the rapidity with which it occurs, and the extent of the impaired electro-muscular contraction,—all have their value as indicating the actual pathological condition of the diseased articulation, and are of great service in making both our diagnosis and prognosis." In all important particulars, though viewed from a different standpoint, M. Valtat's conclusions agree with those stated in my paper, which is, so far as I know (aside from Sir James Paget's remarks quoted in the article), the first contribution to this important and interesting subject.]

N. M. S.

A NEW ADHESIVE PLASTER, ESPECIALLY ADAPTED TO THE REQUIREMENTS OF MODERN SURGERY.

BY

HENRY A. MARTIN, M. D. (*Boston Med. and Sur. Jour.*, Oct. 11th, 1877.)

THE compound of which this plaster is made is of the very best Para rubber, Burgundy pitch, and balsam of tolu. The latter ingredient, besides contributing an agreeable fragrance, has an important effect in rendering the plaster unirritating to the skin, and improving it in other respects. These are the essential ingredients; they are combined and spread on a very strongly woven cloth (which has been thoroughly "shrunk," and deprived of every trace of "dressing" by treatment with the eminently antiseptic liq. zinci chloridi, of Bennett), by means of extremely expensive and exquisitely adjusted machinery, contrived for different and very important manufacturing purposes, but perfectly adapted to this new production. I need not give here a detail of cases in which my correspond-

ents and myself have used the plaster; enough that it has been found to be all that can be desired in all cases, and of very especial value for purposes of extension in fractures, etc., in wounds of the scalp, and bearded and hairy parts of the body, and in those cases in which muscular action and gravitation tend to a separation of the sides of wounds; for strapping for ulcers, the breast and testicle; for attaching and fixing splints, and in treating fractured patella by Sanborn's method. It has been tested in an atmosphere below zero, and found perfectly and readily adhesive, while in one at 100° it has been not more so. Specimens made a year ago evince no signs of change or deterioration, and those of a similar product, made more than ten years since, retain adhesive and other qualities.

At some future time I may publish the commendations of very distinguished practitioners which I have received, but as I have not asked for formal permission to that end, I do not feel at liberty to do so now.

I have transferred the entire commercial charge of this invention and manufacture to my old and valued friends, Messrs. T. Metcalf & Co., of Boston, and I have requested them to present a specimen of the plaster to any physician who may apply, either personally or by letter, that a full examination and testing may be made inexpensively by all who desire. If any of my readers should avail themselves of this opportunity, and use the plaster, I should be much obliged by their giving me their opinion of it, if favorable, and still more if, for good reason, it is unfavorable. I have conscientiously endeavored to test it fully before troubling the profession with this announcement, but defects may be revealed by time, or to other observers; and I am extremely anxious to be made aware, and to make others aware, of such possible defects, as soon as they may be discovered. E. J. B.

A CASE OF NEURALGIA OF THE SECOND METATARSO-
PHALANGEAL ARTICULATION CURED BY
RESECTION OF THE JOINT.

BY
ERSKINE MASON, M. D. (*Am. Jour. Med. Sci.*, Oct., 1877.)

FRANK P., aged 21, native of South America, fireman by occupation, was admitted into Roosevelt Hospital, January 17, 1877, and gave the following history:—

Sixteen months ago he fell from his engine, and received a compound fracture of the right femur, a short distance above the knee, from which he made a good recovery, though with an ankylosed knee. Six months ago he had the great right toe removed in Chicago for what he called neuralgia, though he states that the surgeon who removed it told him that the joint was diseased. It was removed at the metatarso-phalangeal articulation. Four months ago he began to have pain similar to that which had previously existed in the great toe, in the metatarso-phalangeal articulation of the second toe. This

pain has increased so, that for the past two months it has been so severe, when walking or standing, that he had to give up work, and now enters the hospital, either to have the toe removed, or obtain relief in some other way. The general condition of the patient is good. There is no swelling or redness about the toe, but the slightest pressure is sufficient to produce pain, and when walking he bears all his weight upon the heel. All the toes are constantly in a state of great extension, looking almost as if dislocated forward.

A variety of treatment failing to afford relief, I determined to resort to resection of the joint, bearing in mind Dr. Thomas G. Morton's interesting and instructive paper in the *American Journal of the Medical Sciences*, for January, 1876. I accordingly removed this joint by a single straight incision on the dorsum of the toe, on the 6th of February, 1877. So great was the degree of extension of the toe that a partial luxation may be said to have taken place. Nothing abnormal was detected in the articulating surface of the bones removed. From the time of the operation all pain ceased, and he has since had no return of his troubles. The wound, however, was some time in healing, a small abscess occurring upon the under surface of the toe, which remained open for some time. At the present time (August 20) the foot remains well, and for the past few weeks he had been acting as night-watchman in the hospital, is very well and hearty, and free from all pain.

It will be noticed that in Dr. Morton's cases it was the fourth metatarso-phalangeal articulation that was affected. In this instance it was the second. In all his cases I believe an injury was the exciting cause. In my case I have no doubt it was the same, the joint being probably injured at the same time his femur was fractured.—E. J. B.

CORRESPONDENCE.

2349 CATHARINE STREET, }
Philadelphia, Pa. }

MR. EDITOR:—

I offer the enclosed, as it does not advertise anybody,—although there are some four or five persons making, or rather isolating, wheat phosphates,—there is no commercial object. I am neither selling them nor making them, except for my own private practice.

Yours truly,

C. G. POLK.

WHEAT PHOSPHATES.

BY

C. G. POLK, M. D., Phar. D.,

Late Professor of Chemistry in the Pennsylvania College of Pharmacy.

THE tendency of the medical age is to seek organic medicine, and investigators drift along with the tide, imploring nature to reveal her secrets. Now and then a light breaks through the mysteries which hide so much from the scrutiny of man, and a new truth is added to the common stock of human knowledge. Pepsine is an acknowledged remedy; pancreatic juice has many advocates. Isolated brain phosphorous compounds, under the name of the Glycerite of Kephaline, are exciting much interest and, it seems, winning a permanent place in the list of remedial agents.

Ingluvin, from the gizzard of fowl, is now undergoing examination, and no doubt is a good thing, if properly isolated. Some, isolated by myself, has proved excellent in an obstinate case of dyspepsia.

Wheat phosphates, I may say, are the latest novelty in organic therapeutics. These may be obtained by macerating the inner portion of the shell of wheat with hot alcohol, and precipitating at the freezing point, 32° F. Although water will extract the phosphates, its high point of congelation unfits it for the purpose. While the fluidity of alcohol is undisturbed far below zero, it loses its hold on the phosphates when the temperature falls below 32°, and consequently it is the most available solvent. Bisulphide of carbon is too offensive in its odor for ordinary use, but is a better solvent, and will extract the phosphates at a temperature of 60°, but it will not give them up so readily as does alcohol. Terchloride of carbon is the *par excellence* solvent, but the cost is a barrier against its employment, except in manufacturing on a large scale. I believe the credit of introducing phosphates obtained from wheat belongs to Professor Horsford, and constitutes the preparation known as Horsford's Acid Phosphates.

For several years I have been using wheat phosphates, manufactured by myself, and what I am to say is my personal experience in more than five hundred cases. As a nutrient tonic it is very efficient, and seems especially adapted to cases of debility unattended with organic disease. Perhaps I have witnessed more salutary results from its use during lactation than under any other circumstances. The drain made by the nursing upon the vital resources of the mother is often very considerable, and her health very much depreciates; she loses her strength, grows thin, and often lapses into tubercular phthisis. The use of wheat phosphates obviates this; they rapidly supply the loss thus induced, and restore health and vigor. Very often the child does not thrive, it emaciates, it teethes with difficulty, and is liable to fall victim to convulsions or infantile diarrhoea. The phosphates freely taken by the mother will obviate this. I believe, taken by the mother or by the infant, that it will remedy the deficiency of the phosphites and phosphates, which seem

to underlie so much of infantile pathology, as is expressed in deficient tissue and osseous development, scrofula, rickets, and diseases depending upon difficult dentition.

2349 Catharine Street, Philadelphia, Pa.

ABOUT BOOKS.

The Ear: Its Anatomy, Physiology and Diseases. By Charles H. Burnett, A. M., M. D. Philadelphia: Henry C. Lea, 1877, pp. 615.

As the title of the work indicates, this volume treats of the anatomy and physiology of the ear, as well as of its diseases, and the author has taken special pains to make this difficult and complicated matter thoroughly clear and intelligible. Part I., consisting of 162 pages, is entirely devoted to this branch of the subject. The remainder of the work treats of the diseases, and is divided into several sections: 1st. Examination of patients, in which an admirable description is given of the general method of examination, and the instruments to be used. 2d. Diseases of the auricle. 3d. External auditory canal. 4th. Membrana tympani. 5th. Middle ear. 6th. Internal ear; and, finally, a seventh section devoted to a consideration of the methods of relief and education of mutes and partially deaf children.

The book is designed especially for the use of students and general practitioners, and places at their disposal much valuable material. The ear, and its diseases, is a branch of medicine too much neglected by the class of men for whose especial use the book was written; and we think that this is partially due to the fact that the subject is either too superficially treated of in text-books on general surgery, or, on the other hand, too elaborately discussed in works that none but the specialist can read and understand. Such a book as the present one, we think, has been needed, and we may congratulate the author on his success in filling the gap. Both student and practitioner can study the work with a great deal of benefit.

It is profusely and beautifully illustrated, and appears in the handsome manner in which the publishers always send their books from the press.

The Physician's Visiting List for 1878. Philadelphia: Lindsay & Blakiston, 1877.

WE have just received this indispensable little volume, gotten up in its usual attractive and convenient form. No better recommendation could be offered than to say that this is its twenty-seventh year of re-publication, and that those who once begin using it usually continue to do so throughout their professional career. We simply chronicle its appearance, in order that those desiring it may have their orders filled in time.

Transactions of the College of Physicians of Philadelphia, Vol II.
Philadelphia, 1877.

The College of Physicians this year presents the profession with a by no means less interesting volume of "*Transactions*" than it has produced in previous years. It embraces thirteen valuable original papers from such men as Meigs, Mears, Reese, Pepper, Hutchinson, Da Costa and Longstreth. Dr. Mears contributes three papers, two of which we have already given to our readers in full (*vide ARCHIVES OF CLINICAL SURGERY*, vol. i, pp. 250 and 323.) The remaining article by Dr. Mears, "On the Treatment of Old Dislocations of the Shoulder by Subcutaneous Section of the Humerus, and the Formation of a False Joint," may be found discussed by Dr. Shaffer, on page 147 of vol. ii of the *ARCHIVES*. It is one which should receive the attention of every surgeon. The other papers in the volume seem to us no less interesting than those already referred to.

The College is doing a good work in publishing such creditable yearly volumes, and should be encouraged by the profession. Copies are for sale by Messrs. Lindsay & Blakiston.

THE HOSPITAL GAZETTE AND ARCHIVES OF CLINICAL SURGERY,

A Semi-Monthly Journal of Medicine and Surgery,

EDITED BY

Edward J. Birmingham, M. D., and Frederick A. Lyons, M. D.

VOL. 2, NO. 8.

NEW YORK, NOVEMBER 1ST, 1877

WHOLE NO. 17.

CONTENTS.

EDITORIAL.

Is it Elevating or Degrading the Profession?	249
The "Revolutionist" Again.....	251
The New Medical College.....	251

LECTURES.

Clinical Lecture on Syphilitic Meningitis: By Edward G. Janeway, M. D.	262
Clinical Lecture on Mammitis, etc., and on Catarrhal Pneumonia: By Abraham Jacobi, M. D.	265

ORIGINAL ARTICLES.

A Case of Lichen Ruber: By James C. White, M. D.	259
---	-----

TRANSLATIONS.

Surgical Clinic on Phlegmonous Inflammation of the Hand: By M. S. Duplay.....	262
---	-----

HOSPITAL RECORDS.

St. VINCENT'S HOSPITAL, NEW YORK: REPORTED BY ABRAHAM G. WENDELL, M. D.	
Vesical Calculus—Lithotomy. (Service of Dr. Charles Phelps).....	266

PERISCOPE.

CROSBY and ALLEN on the Automatic Method of Reducing Luxations of the Hip. (Dr. Birmingham).....	269
AUBERT on Perspiration in Skin Diseases. (Dr. Piffard).....	270
BEAMWELL on Progressive Pernicious Anemia Cured by Arsenic. (Dr. Hudson).....	270

ABOUT BOOKS.

Wood's Physician's Vade-Mecum and Visiting List.....	271
Outlines of Modern Organic Chemistry: By C. Gilbert Wheeler.....	272

EDITORIAL.

IS IT ELEVATING OR DEGRADING THE PROFESSION?

FOR some time past several of the journals have been striving to "elevate the standard of the profession," after a manner of their own. This method is the recognition of a class of practitioners which the code of ethics and our own personal honor forbid us to have any communication with. In our last issue we exposed one of the "beings" belong-

ing to this class. We now intend to follow the same course with the journals that have affiliated with this individual, and which are in reality accomplishing one of two things: either the degradation of the regular profession, or the elevation of a school of practitioners and a so-called medical college, that have, for the past quarter of a century, disgraced America and American institutions. We think the profession should know the journals which have betrayed the sacred trust imposed in them when they received its support, and evidently for the purpose of securing the advertisement or obtaining the subscription of the Professor of Surgery in the Eclectic Medical College of Pennsylvania.

In the *Nashville Journal of Medicine and Surgery*, for September, 1877, may be found an article on "Vitalized Phosphorus Compounds," and in the *Virginia Medical Monthly*, for October, one on "Treatment of Tubercular Phthisis." Both of these papers are from the pen of Charles G. Polk, M. D., the *distinguished* individual whom we had the pleasure of introducing to our readers in our last issue. The *New Orleans Medical and Surgical Journal* has succeeded in securing the services of the "professor" for a series of papers on "Tuberculosis," a portion of which has already been published in the September and October numbers of that periodical, while the remainder is promised for a future issue. The editors evidently think that such elaborate and learned *original* articles should be dealt out to their readers with the greatest care, so that they may thoroughly digest and assimilate each portion: or are they feeling their way with their *protégé*, so as not to nauseate their readers by administering the whole dose at one time?

The last "original communication" from this personage, and one in which he has the impertinence to appeal to the decision of "the regular medical profession," graces the pages of the *Philadelphia Medical Times* for September 29th, 1877.

We most heartily congratulate the editors of the above-mentioned *high-toned* periodicals upon the success attending their efforts to obtain such a *distinguished* and *able* writer for their respective journals. At the same time we think that they are in duty bound to account to the profession for their action, and if they have erred through ignorance, to apologize for the glaring insult they have been guilty of in forcing the profession to countenance such a disgraceful institution as we exposed in our last issue. It is just possible, though by no means probable, that the *Nashville*, *New Orleans*, and *Virginia* journals may have been imposed upon by the author of the *valuable* articles embellishing the numbers mentioned, but such could not possibly have been the case with the editor of the *Philadelphia Medical Times*. Dr. Horatio C. Wood has been prominently identified with the medical interests of Philadelphia ever since he entered the profession, and probably no one person is better acquainted with the standing of C. G. Polk and the institution which he represents, than is Dr. Wood; yet, in the face of this, he not only publishes an original article from his pen, but in the succeeding issue of his journal he furnishes an abstract of Polk's paper from the *Nashville* journal. This is the man who attempts (*Philadelphia Medical Times*,

October 27th 1877, p. 47) "to teach a lesson in regard to the responsibilities of journalists." We think he needs, sadly indeed, to learn the lesson himself.

We ask, nay, in the name of the profession, we *demand*, an explanation of the action of the above-mentioned journals.

THE "REVOLUTIONIST" AGAIN.

SOME time since we had occasion to call the attention of our readers to the shortcomings of a distinguished professor of surgery in this city, who has evidently forgotten that we are still alive, for we find him again trying to induce the profession to accept him as a veritable saint. As his peculiar style of composition is apt to deceive, unless elucidated by the aid of our pen, and as we are quite certain that the gentleman in question would not for the world countenance deception of any kind, we shall shortly take great pleasure in helping him to enlighten the profession on some of his "peculiar views." We cannot say more at present, as we must now turn our attention to some quotations from Smith, Elder & Co., London.

THE NEW MEDICAL COLLEGE.

FOR some time past there has been a report current to the effect that the trustees of Columbia College contemplated severing their connection with the College of Physicians and Surgeons, which is but a nominal one. The object of such was reported to be the establishing of a new medical department, to be organized on the plan of the continental schools. A surplus in the income of the college of \$150,000 annually was to be applied for the running expenses of the medical department, which was to be located in a building to be erected for the purpose, with a hospital attached. The course was to be prolonged to four years, with a preliminary examination, and one at the end of every year. This report has occasioned some alarm amongst some members of the faculties of the colleges at present in operation in this city, who reasoned that the trustees of Columbia would select the best men from each faculty, and the schools would, therefore, be compelled to discontinue.

We are authorized to say that the trustees of Columbia College, neither singly nor as a body, have ever contemplated any such action. The large surplus in the income of the institution they feel disposed to spend in erecting new and suitable buildings to carry on their present work in, but there is not a single member of the board who has ever entertained the idea of establishing a new medical department. They are desirous that the connection with the College of Physicians and Surgeons should be more than a mere nominal one, and that the course of instruction in that institution should be improved, so as to give a more thorough medical training. It is very doubtful, however, that steps to bring this about will be taken for some time to come.

We had hoped to continue Dr. Thomson's lectures in this number, but a severe retinalgia has prevented the doctor from revising the manuscript. They will be continued, however, as soon as he recovers. A

LECTURES.

CLINICAL LECTURE ON SYPHILITIC MENINGITIS.

BY

EDWARD G. JANEWAY, M. D.,

Professor of Pathological Anatomy and Histology, Diseases of the Nervous System, and Clinical Medicine in Bellevue Hospital Medical College, New York.

GENTLEMEN:—I bring before you to-day a case which, perhaps, some of you may remember having seen last winter; I do so to show you how perfect was the cure. Just about a year ago he was taken sick, but previous to that time he had a disease, the traces of which still remaining, as you see by looking at the cicatrix on his forehead, tell plainly enough its nature. Those are the marks left by syphilis. He denies ever having had a chancre, but admits that he had a running from the penis. We have, however, a clear history of syphilis in other respects, so, if he had only a discharge, it was due to a chancre in the urethra. You know that chancre sometimes occurs in this situation, and it may run its course without the knowledge of the patient. Not long ago I saw a case of a gentleman who had what he and his physician thought to be a simple gonorrhœa, which soon got well, but about six months afterward it was followed by a specific ulceration, whose true character could not be doubted.

Sometimes the syphilitic eruptions are, however, somewhat difficult of diagnosis. Only last week I was called to see the case of a man who was reported to have small-pox. He had quite an extensive eruption on the arms, legs and body, but none on the face. It was chiefly of a red, papular variety, but there were also a number of vesicles, and some pustules. The color was a dark, dusky red, and around some of them there were little elevations of dry epidermal scales. I looked carefully for umbilications, and in some places I found them, where a hair follicle was situated in the centre of the spot. I suspected that it might be a syphilitic eruption, and examined the groins and penis. I found the inguinal glands enlarged, and on the margin of the prepuce was an indurated cicatrix which had contracted and caused phimosis. There had been considerable fever, but the eruption had persisted over two weeks. Here then we had the diagnostic points: the indurated cicatrix and the enlarged glands, and the duration of the eruption, for a small-pox eruption never lasts that length of time. In such cases we must be very careful of making the diagnosis of small-pox. You may, perhaps, think such caution unnecessary, but I have seen six or eight cases in which an eruption of syphilis has been mistaken for small-pox.

But to return from our digression to the case in hand. In October last, that is a year ago, this man had paresis of the right leg and arm, with a certain amount of paralysis of the face. There was some little numbness in the hand, and the loss of power was about one-half. On a number of occasions he had epileptic seizures, with severe convulsive

movements and spasms on the right side. He suffered from loss of memory and impaired vision. He was placed under treatment by iodide of potassium and bichloride of mercury, and the actual cautery was applied to the back of the neck. After a short course of treatment he was entirely relieved, and has felt well ever since. He has not had a convulsion since the 2d of last December. He left the hospital once, too early, and the result was that the convulsions and other bad phenomena returned. Now the question is, What was the trouble in this case? The man in all probability had a gummatous meningitis of the dura mater at the base of the brain on the left side. This was productive of convulsions and paralysis, by causing irritation of the anterior portion of the brain. The patient is still taking anti-syphilitic treatment.

The next patient is Mrs. G. R., 50 years old, and a widow. Her husband died of consumption, contracted during the war. He was healthy up to the time he left home, but after he returned suffered considerably from various kinds of skin diseases and ulcerations. Her father, mother, and rest of family, were healthy. Six years ago she had ulcerations on the right leg and arm, but none on the opposite side. Usually in this disease analogous points on both sides are affected, but in this instance it was only on one side. At this time she used to suffer a great deal from pains in the bones, worse at night. You see a circular cicatrix on the knee, and a brown discoloration at the border. This shows that there is some pigment in the skin, left behind as a result of extravasation of blood.

She comes to us now complaining chiefly of very severe pains in the head, with constant sense of noises in the ear, and she says her hearing and vision are impaired. We must first examine for external periostitis, for I have very often found, on autopsy of these cases, that where there was meningitis, the periosteum outside was likewise the seat of inflammation. If this be so we shall find a soft and succulent feeling on pressure, which will give rise to pain. On examination we do not find these signs, and consequently must conclude that whatever process is going on, is limited to the inside of the cranium. I see no evidence of trouble in the bones.

Examining the limbs, we do not find any marked paresis. The right hand squeezes the dynamometer to eighty on the outside scale, while the left turns the index to sixty. On testing by the aesthesiometer, we do not discover any loss of sensation. The patient walks perfectly well, and has no trouble with the lower extremities. She tells us that the pain in the head is not localized anywhere in particular, but the whole head is affected, and bothers her a great deal more at night than in the day-time. On looking into the eyes, we see unmistakable evidences of an old iritis. The pupils are small and irregular in their inner periphery, and a whitish opaque streak is seen to stretch across the centre. This is due to the effusion of lymph, which has become organized. This disease occurred at the same time that the leg was ulcerated. The sight is less acute in the right than in the left eye.

Hearing is about normal. The facial muscles work perfectly, as seen when she laughs or frowns. Sensation on the face is fair, and equal on the two sides. The sense of smell is good, and the sense of taste likewise.

She complains that the pain in the head is sometimes of a throbbing character, and this might give a suspicion of aneurism; but against such a theory we have the fact that she suffered from just such pain a month ago, but got entirely rid of it. We will be obliged, then, to consider this case as a gummy meningitis.

There is another point we must think of in these cases. We might get such symptoms from some other conditions than a gummous inflammation of the dura mater or pia mater. We frequently have a degenerative process going on in the inner coats of the arteries; this degeneration leads to thrombosis, and finally a circumscribed softening of the brain tissue is induced. In many cases of what is called general paralysis of the insane, syphilis is at the bottom of the whole trouble. We always have one of two conditions present: 1st, inflammation of the meninges, of a gummous type; or 2d, disease of the arteries.

I am here reminded of a case of this description, which was extraordinary on account of the youth of the subject. This condition usually occurs only in advanced age, but in this instance the young man was only 23 years old. He had general paralysis, but not in the ordinary sense. He had a double hemiplegia, the paralysis first affecting one side, and then the other—the whole body being affected. It was extremely difficult to make an accurate diagnosis, but we finally came to the conclusion that the symptoms were produced by a gummy tumor, situated near the fissure of Sylvius. On autopsy, however, we found lesions of the cerebral arteries, degeneration, thrombosis and softening.

Where the lesion is so deep-seated we cannot expect to do much good, but when it is in the meninges, we may have great hopes of making the patient much better, if not of curing him entirely.

The treatment for this woman will be iodide of potassium and bichloride of mercury, and if she does not get well soon, we shall apply the actual cautery to the back of the neck, as it usually does a great deal of good in these cases. The syphilitic treatment should be kept up for some time. My friend and colleague, Professor Keyes, believes that all cases of syphilis may be cured, and subsequent lesions prevented by proper continued treatment at first. This may be true, but we meet with any number of patients who are troubled with various tertiary manifestations of syphilis, who have been under regular treatment for a long period. There is no disease that I know of that produces so many and such vital lesions in all parts of the body as syphilis.

CLINICAL LECTURE.

Delivered in the Amphitheatre of Bellevue Hospital, New York.

BY

ABRAHAM JACOBI, M. D.,

*Clinical Professor of Diseases of Children in the College of Physicians and Surgeons, New York.

1. MAMMITIS, APHTHÆ, AND DIARRHÆA. 2. CATARRHAL PNEUMONIA.

GENTLEMEN:—The child that I now show you is three weeks old, and there are a number of conditions present that remind you of the newborn state. On examining the chest of the little patient, you discover that the two mammae are somewhat red and swollen. You sometimes find this condition occurring when the infant is but a few days old. On squeezing the breasts, a fluid exudes, and the common rule in treating this affection is to press the liquid out, but this is a great mistake, as mastitis is made worse by handling the mammae. The liquid that exudes is milk, which compares very closely with the milk of a nursing woman. Simon, the French chemist, after a careful analysis, showed that this kind of milk did not differ much from mother's milk, with the exception that the latter contains a larger proportion of caseine.

This affection of the breasts in young infants does very well when left alone. The result of squeezing is usually inflammation and suppuration, which ends in the partial destruction of tissue. The tissue destroyed is never repaired, and the breast does not attain its proper growth. I know several adult women who have a breast only on one side, and the absence of the other is due to the loss of tissue during infancy. A simple application of glycerine or oil is all that is required in most of these cases. Something else, however, may occasionally be resorted to with advantage. The external application of iodide of potassium is frequently useful. The salt may be dissolved in water or glycerine, and applied to the part. In this form it is taken into the skin in a much better way than when ointments are employed. Ointments made with fat in most cases are of absolutely no use, as they act only on the surface or cutaneous nerves. The solution in glycerine penetrates the skin much better and more rapidly, and this may be proved by the fact that, when an ointment is used, the iodide is not found in the urine for several days, but after using glycerine, the salt may be detected in twenty-four hours. A better mode still of getting the medicine into the system is by using oleic acid. This substance penetrates the skin with great facility and rapidity, and whatever is soluble in it may be administered in this way.

Quinine dissolves in oleic acid, and a few hours after its exhibition may be found in the urine. It may be given by this means, if there be any difficulty in introducing it by the stomach or rectum. There is only one drawback in the use of this agent. Oleic acid is itself an irritant, and may make the skin red and inflamed. A few pustules may form, and then not so much of the medicine will be absorbed. Carbolic acid may be

mixed with oleic acid, and erysipelas may be treated by this method. Oleic acid penetrates the skin readily, and whatever it contains goes along with it. With children, use the proportion of about one to sixty. In this case before us we shall use one part of iodide of potassium in four of glycerine, spread on lint, and laid on the mammae.

On looking more closely at this baby, you perceive a slight erythematous eruption. It is wrapped up in a hard flannel, and this in itself is often enough the cause of an eruption of this nature in new-born children. You see the same thing happen when new diapers are used, that have not yet been washed. On examining the umbilicus, we find it to be in good order, and it has the appearance that properly belongs to it in a child of three weeks of age.

Looking at the lips, we find that they present a much redder color than normal, and on inspecting more closely we discover that they have been deprived of their epithelium. On questioning the nurse, we learn that the child does not swallow well, and we will probably find that the mouth is in a similar condition, which would naturally cause a difficulty in deglutition. Instead of the mouth having its normal coating it looks very red. Upon the palate there is a white patch, looking very much like an ulceration. We have, then, a condition in which the epithelium of the lips, tongue, cheeks, palate, etc., is absent, and besides this, a spot that looks like an ulceration. It is not an ulcer, but the opposite: an infiltration. There is no loss of substance, but, on the contrary, a slight elevation. Every loss of substance is produced by an inflammatory condition. The muciparous follicles swell and become raised above the level of the mucous membrane. Vesicles form, which burst, and then ulcerate. But such is not the case here. The white color cannot be due to a vesicular inflammation of the muciparous follicles. It is a fibrinous exudation, and these spots have received the name of aphthæ. Usually the vesicular disease that I have described is called aphthous stomatitis, but the only condition which should properly deserve this name is that in which there exists a fibrinous exudation. The other should always be called follicular stomatitis?

Now, what are we to do in this case? We must prevent the disease from getting worse, and by doing this it will get well spontaneously. Where the infant is fed so often, the cause must be removed. The milk that remains in the mouth after nursing becomes rancid and acid, and keeps up the irritation. A large number of the diseases of the mouth in infants is caused by want of proper cleanliness in not washing out the mouth after every nursing. The milk turns acid immediately, and consequently produces an irritation. In this case I should propose, then, to wash out the mouth carefully, and use a solution of soda or chlorate of potash. Simply introduce a few drops into the mouth frequently, and have it cleansed after every feeding or vomiting.

There is still something else in this baby that must be looked to. We learn that it has some diarrhoea, and that the mother suffered from cellulitis, with fever, while she nursed it. In these cases the amount of milk is usually changed. It contains less water, but as a rule the child

may nurse as long as the strength of the mother holds out. Nature allows of a great deal of latitude in the mother as regards the change of milk. It is very much of a question whether a change of milk in the mother was the cause of this infant's diarrhoea. It has had only six to eight passages in the twenty-four hours, but they looked a little greenish. This trouble can be removed by a few doses of grey powder. However, the nursing may be stopped; and if the child be fed on cow's milk, boiled and skimmed, and mixed with a little farinaceous substance, or gum arabic, the disease will get well. I should advise, at the same time, an anti-fermentative, such as calomel. A dose of opium, about 1-5 of a grain of Dover's powder, every few hours, might be useful. An antacid might also be used with advantage. There are the carbonates of lime, potassium, sodium and magnesium. In intestinal catarrhs we must distinguish between these salts. When the carbonates of sodium and magnesium are taken into the stomach, they will form organic salts, which are purgative. We should therefore choose potassium or lime. Chalk, then, would probably be the most suitable.

CATARRHAL PNEUMONIA.

The little girl that I now present to you has a history of catarrhal pneumonia. I shall not now go extensively into the history of this disease, but simply state that catarrhal, or lobular pneumonia generally comes on after an attack of bronchial catarrh. As a rule it will spread to both sides of the chest, and we shall have both lungs involved. We must likewise expect it to spread over a number of lobes. We may, moreover, anticipate a new attack in distant parts, when the old spots get well. This follows from the well known tendency of catarrhal inflammations to spread.

At the last examination of this little patient it was found to be worse on the left side, but now there is evidence that it has spread on the right side also. It is possible that these spots of catarrhal inflammation may be older than those on the left side, but were not noticed, because the other side was worse. We find increased and coarse respiration on auscultation, and dulness on percussion. On the other side we find some dulness, coarse respiration, and a few rales. On the right side it has undergone resolution in places. The respiration is diminished, which shows that a larger portion has become infiltrated, or that there is something between the ear and the lung. If there were increased infiltration, there would be bronchial respiration, but its absence would show a pleuritic effusion. On the right side, then, where there are considerable dulness, diminished respiration, and resolution rales, there has been pleuro-pneumonia.

And now we will take the temperature, to see whether we have to deal with a disease that is getting well, or whether there is an additional disturbance. This is often the only indication we can get of the progress of the disease. On looking at the thermometer we find the temperature to be 101° F. Thus, there is certainly not a great elevation of temperature, as it is only one degree above the normal heat in the rectum, which,

I may say, in passing, is the only place where the temperature of children should be taken.

The disease is still in progress, but there is no new inflammation going on. An elevation of temperature always means some active influence at work in the blood and nervous system. It may be the result of the disintegrating process taking place in the inflammatory material. There must have been a large amount of exudation in this case, which is now undergoing granular and fatty degeneration, and must be taken back into the blood. This causes the increase of temperature, and in many cases we often see this elevation continuing for weeks during the progress of this process.

The question now is, what to do. A chronic condition of this description, when not relieved, may be a cause of trouble for life. It may give rise to emphysema and consumption. The fever will take care of itself when the elimination is completed. We must see that the patient has good nourishment, and sometimes stimulants. Fluid or semi-fluid food should be given with, perhaps, a few drachms of brandy.

A patient suffering with, or recovering from, this disease may contract diarrhoea on account of the obstruction of the circulation. Beef tea contains a large quantity of salts, and when you give it pure and simple, that alone is sufficient to loosen the bowels. The constant result of giving beef tea in summer diarrhoea is to increase the disease. If you do give beef tea, mix with it something to counteract the effect of the salts.

As there is so much tendency to diarrhoea in pneumonia, do not give anything that has a tendency to loosen the bowels. An excellent plan is to give eggs, soft-boiled or raw; where the child cannot tolerate them, give the white raw, mixed with gum or barley-water.

As a stimulant we may use whiskey, or a quarter of a grain of camphor in water, or alcohol every two or three hours. Syrup of the iodide of iron is a very eligible preparation, as it is most digestible, and indeed often improves digestion, on account of its decomposition in the stomach, the iodine acting as an anti-fermentative. After some time, when the iron has done its duty, it may be well to give arsenic. It is one of the best nutrients we have, and in anaemic conditions it will not only strengthen, but fatten. It is an excellent remedy in all cases of anaemia and weakness.

In good weather, the child should be taken out, so as to have plenty of fresh air. In the meantime the temperature should be watched very carefully, to see how the progress of absorption is going on.

ORIGINAL ARTICLES.

A CASE OF LICHEN RUBER.

BY
JAMES C. WHITE, M. D., BOSTON,
Professor of Dermatology in Harvard University.

THE patient, an American woman, unmarried, aged 30 years, had led an active life, and been in good health until August, 1876. The skin over the upper abdomen then began to itch and burn, at night especially, on removing the clothing, and looked red and inflamed. These symptoms lasted about an hour, and in the morning the skin appeared natural again. This condition continued a month, when the skin of the soles and palms, of the chin and throat, became affected in the same way. In December she noticed the appearance of dark, red, scaly patches upon the abdomen, thighs and arms, which increased rapidly in size, and upon the trunk extended around the waist to the back, and thence to the hips. Those upon the thighs grew to cover the whole leg to the knee. The eruption was everywhere accompanied by great itching. Arsenic and iron were prescribed in January by her physician, and later a tar ointment, which was applied two or three times a day. Under this treatment there was a partial subsidence of the symptoms. The redness and swelling of the skin and the itching were greatly relieved. Early in March she gave up the treatment, and went to work again as a clerk. Her feet and hands began to swell again immediately, and the eruption revived. This was the history she gave me on March 21st, 1877, when I first saw her, and her condition, which had been rapidly growing worse for two weeks, was then as follows:

The hands, with the exception of a small portion of the central dorsal surface, were uniformly thickened, and of a peculiar livid crimson color. These comparatively healthy areas were partially occupied by discrete, typical papules. The palms were cracked slightly in the lines of flexure, and these fissures, and the natural furrows of their skin, were filled with fine, white, dry scales. The arms, from the wrists to the elbows, presented a compact mass of confluent papules, forming a uniform infiltration marked on its surface by the tips of the primary papules. From the elbows upward the infiltration was less developed, and near the shoulder the skin exhibited only discrete papules. Around the neck there was a belt, about two inches broad, of confluent papules, abruptly defined above, but thinning out on its lower border into distinct scattered papules, which ran down upon the middle of the front chest to the breasts,

in a continuous belt of small, isolated papules. The remainder of the front chest and the breasts were sparsely occupied by small, discrete papules, the size of a pin's head. The surface of the confluent papules was generally covered with very fine, white, branny scales, and here and there some of the isolated papules were capped in the same way. The skin surrounding the axillæ, immediately below the breasts and over the umbilical region, was of a dull red color, without infiltration or papules, and covered with numerous very dark brown pigment spots, several lines in diameter. These were the earliest seats of the disease. The back and lower abdomen were nearly free from the eruption. The lower extremities, from the nates, hips and groins downward, presented one uniform condition. The skin was greatly thickened, intensely red, and its surface was in parts roughened by flattened, confluent papules, in other parts even and uniformly covered with the finest possible white scales. The lower legs were also oedematous, and the feet so swollen that the boots could not be buttoned. There was no apparent change in the nails or hair.

The only portion of the body wholly unaffected was the head; and the only parts which exhibited the initial lesion only, those which had become affected very recently, were the small areas upon the backs of the hands, which were rapidly filling up with new papules, and the upper chest. These papules were at first very small, individually, and almost colorless, rising abruptly from the general surface. They were very dense, as if firmly organized from the start. The tips were rather flattened than pointed, and they became slightly more elevated as they increased in diameter, which never exceeded two lines. They rarely reached one line in height before the successive appearance of new papules in the interspaces converted the whole district into an elevated patch of uniform infiltration, upon the surface of which the outlines or tips only of the individual efflorescences could be distinguished. The whole was of an intensely livid crimson tint, and readily shed fine, white, dry scales. The papules never exuded moisture, became vesicular or pustular, or presented any crusts or excoriations.

The mucous membrane of the lips, tongue and cheeks presented a white, thin coating (arsenical?), and the tongue was fissured. The parts were not over-sensitive, however.

The subjective symptoms were a slight degree of itching, tenderness on pressure over the flexures of the joints and the fissures in the palms, and partial immobility of the feet and hands. In the earlier stages, in fact until the tar ointment was used, intense itching was a prominent symptom, which never provoked, however, any eczematous reaction.

The general condition of the patient at this time was good. She was plump, and her digestion and menstruation were normal. She said that she felt "nervous," and that, when startled, her skin felt prickly. She was much troubled in mind about her disease, and about the difficulty in moving her hands and feet.

Fowler's solution of arsenic was directed to be taken, six drops three times a day; valerianate of zinc in two-grain doses, twice daily,

prescribed; and the whole surface ordered to be rubbed at night with oil of cade, one part, and cosmoline, four parts.

For a week or ten days the patient was very uncomfortable, being confined to the bed on account of the great swelling of her limbs, but on April 13th she was able to go out again. At that date the former intense and livid redness had everywhere largely faded to a dull purplish or even brown color, and the œdema of the limbs was greatly reduced. No fresh papules had appeared. The skin over the legs and arms was harsh, and marked by the presence of pits, of irregular shape and size, abruptly sunk in the general infiltration, looking like those of small-pox. The fingers were very thickly covered with firm, white, mealy scales, but elsewhere the scaliness was much diminished. The arsenic was increased to seven drops, and a softening wash was directed to be applied to the skin by day.

April 26th.—The general irritation and redness of the surface was less, and the œdematosus condition and cell infiltration of the skin were diminished. The pits were less conspicuous by the flattening down of the surrounding skin. The scales were mostly confined to the hands.

June 11th.—There was no longer any irritability of the skin. The pits, papules and scales had gradually and wholly disappeared. There was still some congestion of the skin everywhere, and dark-brown pigment stains were scattered over the whole surface, but they were rapidly growing paler. The hands only were still quite red and glazed, but they, with all other parts, had returned to the natural size. The patient stated that she felt nearly as well as ever again, and was desirous to return to her work. The local treatment was suspended, but she was directed to continue the arsenic in gradually diminished doses for several weeks.

In September the patient came to see me again, she had resumed her work, and was apparently in perfect health. The arsenic had been constantly taken. The only visible remains of the disease were a dryness of the hands and the presence of a few indistinct pigment spots upon the abdomen.

The case presented the most characteristic features of this rare disease—lichen ruber, Hebra—*a very marked degree*. These were: uniformity of development; the persistent unchangeableness of the papular efflorescence until, by multiplication, the individuality of form was lost in general infiltration of the integument; the peculiar purplish crimson hue; the fine scaly covering of the surface and crevices of the skin; the abruptly sunken pits in the infiltrated tissues; and the striking pigment stains in the parts longest affected. During its long course, and over its wide surface of distribution, there were none of the waxy papules with a depression upon the summit which Prof. Hebra describes as characterizing one of the forms of the affection. The rapid recovery of the patient, while taking arsenic, corroborates the later favorable opinions held by him concerning its action in the disease; but quite as wonderful improvement was noted by Dr. Taylor, of New York, in his cases,* in which arsenic was not used.

* "Clinical Notes on Lichen Planus, and Letter from Dr. Kaposi, of Vienna, concerning the same." *American Archives of Dermatology*, vol. i, pp. 30 and 134.

TRANSLATIONS.

SURGICAL CLINIC

Of the *Hospital Saint Louis*,

BY

M. S. DUPLAY.

PHLEGMONOUS INFLAMMATION OF THE HAND.

(Reported by *Ferrand*, Provisional Intern.)

GENTLEMEN:—We shall now see No. 55, ward St. Augustine, a patient aged 57 years, a brushmaker by trade, who entered the hospital eight days ago. He presents an inflammatory affection of the left hand and forearm, an affection caused by a very light prick which he made on the pulp of the thumb. It was, he tells us, a mere scratch, to which he did not pay any attention. It did not interrupt his work, and he contented himself with applying some alcohol to the injured finger. On the following day he commenced to suffer pain, and this pain increasing so rapidly, and the hand becoming swollen, he decided to enter the hospital.

What strikes you first when you examine the diseased hand, is its very peculiar position. This is, as we shall see presently, a symptom of great importance. The first phalanx of the fingers is, in the upright position, on the same plane as the metacarpals. The two last, on the contrary, are flexed, and form, with the preceding, an obtuse angle, in such a way that the hand has the form of a claw. This is not a temporary position, which the patient can throw off or assume at will, but it is permanent, and if we attempt to modify it, the patient will tell us that we are causing him acute pain.

The study of this last symptom will detain us a moment. The pain during rest is acute, lancinating, and sufficiently violent to rob the patient of sleep. The pain provoked by movements impressed on the fingers to correct their abnormal position is equally acute, and is prolonged by the pulling on the flexor tendons.

The pain on pressure is interesting to study. It is present over the palmar surface of the thumb, the palmar eminence of the hand, and extends over the anterior surface of the forearm, to about three fingers' breadth above the radio-carpal articulation. In the palm of the hand it does not extend on either side much beyond the centre, but it invades the palmar eminence of the little finger. In the points where this pain is situated we have a swelling of the diseased parts from the base, without the appearance of fluctuation.

The hand, and one part of the forearm, above all its external side, present a rosy tint, to which I wish also to call your attention. The same parts also show an increase of temperature, easily appreciable.

If I add that constitutional disturbance is entirely absent; that all the functions are accomplished regularly; in a word, that the health is good, I shall have completely described to you the state in which we find the patient.

The four classical symptoms: swelling, redness, pain and heat, do not leave a doubt in our mind, and we have evidently to do with an inflammatory affection limited to the hand and forearm.

But what is the anatomical seat of this affection? What particulars does it offer for our study, as regards course and prognosis? What therapeutic indications does it give us? Such, gentlemen, are the questions we should put to ourselves.

As regards the anatomical seat of the disease, the symptoms that I have described correspond exactly to those which we should assign to an inflammation of the sheath of the tendons of the hand and wrist.

Here permit me to recount in a few words the general disposition of the synovial sheaths that accompany the flexor tendons of the fingers.

While the sheaths of the flexor tendons of the three middle fingers (the ring, middle and index) stop a little above the metacarpo-phalangeal articulation, those of the thumb and little finger are prolonged, on their superior side, to the common sheath which lines the radio-carpal canal, and in the majority of cases communicate with this common serous membrane. This, in its turn, extends upward to about three fingers' breadth above the radio-carpal articulation, and downward to the middle part of the palm of the hand, where it terminates in a *cul de sac* about two fingers' breadth above the line between the radius and carpus.

Now if you will recall the limits of the swelling and redness, you will see that they exactly represent those of the tendinous sheaths, and that a strict relation exists between the anatomical data and the symptoms observed. This is the reason we have localized the inflammation in the sheaths, and most surgeons would designate the affection which you have before your eyes as a tendinous synovitis.

In the present case the question seems most clear, so well are the different signs limited. But here we have a most typical case, and it is not always so in practice. Also in presence of certain facts, difficult to explain by the preceding theory, the existence of this tendinous synovitis has been thrown in doubt. According to Dolbeau and Chevalet, all the preceding symptoms could be explained as due to a deep lymphangitis, having the thumb as its starting-point. Numerous arguments have been advanced in favor of the theory of lymphangitis as opposed to that of tendinous synovitis: I shall not dwell on the point here.

In my opinion, in the present case, you can verify the existence of several symptoms which would be absolutely inexplicable under the hypothesis of inflammation of the lymphatics. How explain, for instance, the retraction of the fingers? According to M. Dolbeau, it is due to the contraction of the muscles in sympathy with the inflamed lymphatics. But here the tendons alone will be in connection with the lymphatics, seeing that the swelling and pain have not passed three fingers' breadth above the wrist. How can we admit a lymphangitis so exactly circum-

scribed; and, above all, how can we explain the progress which we have observed? At the beginning, the swelling and pain of the thumb extended to the palmar eminence and the anterior surface of the wrist, then two days later there was a sensible diminution of the pains and swelling in the thumb; but, in return, the appearance of these same symptoms along the palmar surface of the little finger. It is impossible that inflammation of the lymphatics should have followed a downward course. Now this mode of propagation is altogether abnormal in the history of acute lymphangitis, which follows the extremities toward the principal trunks. If we compare the difficulties of interpretation, under the hypothesis of a lymphangitis, with the facility with which we can explain the cause of the circumscript, and the progress of the phenomena under the doctrine of synovitis, we shall not hesitate to admit that our patient offers a very fine example of an acute phlegmasia of the synovial membranes of the fingers and wrist,—a synovitis which, originating on a level with the thumb, was propagated to the common radiocarpal sheath, and reached consecutively the sheath of the little finger, which generally communicates with it.

But, synovitis being admitted, how can we explain the development of the inflammation? If the serous membrane were open, nothing would be more simple. But it is not. The small wound, the starting-point of the trouble, is, I repeat it, nothing more than a simple erosion, altogether superficial. How, then, could the inflammation extend to the sheaths, they being so much more deeply situated than the causal lesion?

It is here, gentlemen, that we must call in the aid of the lymphatics; it is they which serve as intermediates to carry the connection between the injured skin and the diseased sheath, between the wound badly cared for, irritated by alcohol, and the serous membrane, quick to inflame, there being such slight thickness and such slight resistance offered to the inflammatory process.

As you see, I do not adopt, and neither do I reject completely the one or the other of the two theories, and, admitting, with Velpeau, the synovitis, I allow the lymphangitis to play a certain part.

Synovitis of the fingers and of the hand follows two very different courses. One form progresses rapidly, terminating in suppuration, and the fluctuation appears early. Such is the case we have seen at No. 32, St. Augustine ward,—a case in which we saw the gravest results come on in two days. The other variety has an insidious progress, much slower than the preceding. Sometimes the symptoms to which I have called your attention remain only a certain time, and then gradually grow better, and finally disappear. It almost ends in resolution, though there remains in the sheaths a plastic exudation to which I will return when I speak of prognosis.

Sometimes the symptoms persist, and there is formation of pus. Then the surgeon should watch the forearm with the greatest attention. It is in this point that the fluctuation, very evident in the thumb and little finger, is the most difficult to detect, on account of the great depth at which the purulent collection is found. We must be careful always to

search for it along the longitudinal axis of the limb. If, indeed, we search for it by placing the fingers at the extremities of the transverse diameter, the muscles, by displacing one another, will surely give a false sensation of fluctuation. I insist purposely on this point, for, according as there is pus or not, according to whether it is contained in the sheaths or diffused among the muscles of the limb, we ought to interfere in a different manner.

The prognosis varies according to whether pus forms, or the affection stops in the first period.

In the first case the situation is serious; under the action of a prolonged contact with the pus which they contain, the synovial membranes may, indeed, yield. The pus will diffuse itself among the muscles, so numerous in this region. Fluctuation will become manifest, and the patient will present constitutional symptoms. We will then have a complete abscess, which may invade the entire limb, involve the wrist in a purulent arthritis, and bring in its wake the whole train of symptoms that characterize pyæmia. We shall then be forced to perform amputation of the arm.

In the second case, that is to say when pus does not form, the patient will retain a little pain in the movement of the fingers, on account of the plastic exudation of which we have spoken. Now and then it remains enclosed. It is then that there is destruction of the tendons. The disease is then absolutely incurable.

In the first period of this disease we may employ the ordinary treatment directed against inflammations: immobility, position, leeches, emollients, local baths, mercurial frictions, vesications. If this treatment succeeds to relieve the stiffness of the fingers, we may employ rubbing and shower-baths. If, on the contrary, suppuration is produced, we should interfere energetically, and quickly give issue to the pus.

The incision should generally be made two or three fingers' breadth above the articular line of the wrist. It should be directed along the longitudinal axis of the limb, and we should cut through successively the skin, the fascia, and the muscular bundles.

The pus is situated at a great depth, on a level with the pronator quadratus. We should, in order to reach the interosseous space, use the channelled probe, and pass it as far as we are able in among the muscular interspaces. We obtain, in this way, a long and deep incision, which answers the therapeutic indications, it is true, but yet will not be satisfactory from every point of view. Indeed, on account of the depth of the incision, the easy approximation of its lips, which are entirely muscular, the pus will flow out badly. The wound will always tend to close, and the pus will make its exit in an intermittent manner; it will be necessary to separate the lips of the wound several times a day. An Italian surgeon, M. Parona, proposes to obviate these manifest inconveniences, by proceeding in the following manner: The incision should always be made on the internal side of the forearm, well extended in the longitudinal direction, leaving the ulnar artery above; the anterior surface of the ulna should be followed closely. We shall thus

quickly have reached the focal point, by passing between the flexor profundus and pronator quadratus.

By following this method we arrive most rapidly to the bottom. The lips of the wound do not tend to close as in the anterior incision. Finally the pus flows out more easily, because, in the habitual position, the forearm rests on its ulnar side. Such are the advantages pointed out by M. Parona. Without knowing the exact value of this operative procedure, I think that it deserves to be studied, and I propose to apply it on the next occasion that presents itself.

(The patient who was the subject of this lecture has nearly recovered. There is a little articular stiffness which is being treated by massage, shower-baths and electricity.)—*Le Progrès Medical*.—F. A. L.

HOSPITAL RECORDS.

ST. VINCENT'S HOSPITAL.

Contributed by Dr. ABRAHAM G. WENDELL, House Surgeon.

VESICAL CALCULUS.—LITHOTOMY (SERVICE OF DR. CHARLES PHELPS).

M. F., aged 66,—married,—born in Ireland,—laborer,—admitted into the hospital May 2d, 1877. Family history indefinite. Denies venereal disease, and there are no symptoms of it. The patient had always been a strong healthy man up to eleven years ago, when he noticed, for the first time, some slight pain on micturition, a sense of pain and uneasiness in the pelvis and perineum; an occasional intermission of the stream of urine; pain and itching in the head of the penis, particularly at its orifice; a bloody state of the urine at times; frequent micturition; and during this period his general condition began to suffer, and he lost flesh, and became weak. His sleep was disturbed at night, his appetite impaired, and he was in every way "good for nothing." Four years ago, after a debauch, he had complete retention of urine. This was relieved by the catheter, which was used for the following six days. Since this attack of retention, his sufferings increased, and he was obliged to give his business up entirely, as he could not work on account of the excessive suffering. He was advised by his physician, who made the diagnosis, of "enlarged prostate," to use a silver catheter, No. 6, whenever he had a call to urinate. On examining the patient, we could notice in his countenance an expression of deep distress; the pulse was small, frequent, and irritable. He was thin and wan, the tongue covered with a whitish fur, and he complained, besides the symptoms above described in an aggravated form, of having no appetite; that he is harassed with sour eructations; his bowels are irregular, and that lately he has had night-sweats. On examining the rectum, some soreness is felt as the finger is introduced, and on touching the prostate he complains of pain. This is found somewhat enlarged.

The introduction of Thompson's searcher produced no pain, and we readily detected the presence of a calculus, the size of which seemed pretty large, as far as we could ascertain.

May 4th.—Dr. Phelps examined patient to-day, and confirmed diagnosis; ordered to keep bowels open, and relieve pain by anodynes.

May 9th.—To-day, at 1.30 P. M., patient was put under the influence of ether, and Dr. Phelps, in the presence of the house-staff and several medical students, proceeded to operate by Le Drant's bilateral method, in the following manner: he made a semilunar incision across the perineum, beginning on the right side, midway between the tuberosity of the ischium and the margin of the anus, and terminating at the corresponding point on the opposite side. In this direction were successively divided the skin, cellulo-adipose tissue, and superficial fascia, together with a few of the anterior fibres of the external sphincter muscle. The end of the left forefinger was now placed at the bottom of the wound the staff sought, and the membranous portion of the urethra laid open. The nail of the finger was then applied to the staff, to serve as a guide to Wood's lithotome, the beak of which was inserted into the groove of the instrument, taking care, by moving the lithotome several times forward and backward, that it was securely lodged in the groove; the handle of the staff was depressed nearly to a level with the abdomen, at the same time that the lithotome was lowered and pushed onward into the bladder. As soon as the instrument reached the bladder, the point was disengaged from the staff, and this immediately removed. The lithotome was next removed, having divided the sides of the prostate in the same direction as the incision. The finger now took the place of the instrument, and having ascertained the situation of the stone, the forceps were introduced, and the extraction effected in the usual manner. The hemorrhage was easily stopped by the application of ice to the parts, and the patient, after having had his legs bound together by a roller bandage, was transferred from the operating-table to his ward. A soft rubber catheter was introduced into the bladder, through the wound, and left there. The patient came out from the effects of the ether remarkably well, but about an hour after, began to complain of chilly sensations, his extremities became cold, he had a feeble pulse, and imperfect, sighing respiration, nausea and vomiting, and in fact all that peculiar train of symptoms which denote shock. Stimulants in the way of hot brandy and water, warmth by means of blankets and bottles of hot water to the feet, a mustard poultice to abdomen, and a full dose of opium, to allay vomiting, were immediately administered.

These symptoms lasted for six hours before reaction was thoroughly established.

May 10th.—Patient in good spirits; he complains of pain referred to the neck of the bladder, and of a burning character, coming in paroxysms; his urine has passed through the wound in considerable quantity. He slept well. Temperature 100° F., pulse 98, respiration 18. The rubber catheter was removed.

May 11th.—The edges of the wound are considerably swollen, and the urine has ceased to flow through the perineum, and taken the course of the urethra. The pain in the wound is not so severe. He takes anodynes. Temperature $101\frac{3}{4}^{\circ}$, pulse 99, respiration 18.

May 14th.—The urine has ceased to pass by the urethra, and is passing again by the wound, with considerable pain. A dose of castor-oil was given to-day, and as the purgative was tardy in its action, an enema of tepid soapsuds was used, with good effect. Demulcent drinks are given *ad libitum*. Temperature $98\frac{3}{4}^{\circ}$, pulse 85, respiration 18.

May 17th.—Patient last night had a distinct chill, and began to complain of pain all over the abdomen; this is found tympanitic on percussion, the pain aggravated by pressure. Temperature 103° , pulse 110, respiration 23. There is complete retention of urine, and patient feels very bad. His catheter was introduced by the house-surgeon, and fourteen ounces of dark-colored urine, loaded with mucus, was drawn from the bladder, to his great relief. Ordered hot fomentations to abdomen, and a full dose of opium.

May 18th.—Patient relieved of pain, but condition of abdomen and bladder the same; the catheter has been used twice a day, and the same treatment continued. Temperature, $102\frac{1}{2}^{\circ}$, pulse 106, respiration 19.

May 19th.—There is pain on pressure on the abdomen, although on percussion it is found tympanitic; condition of bladder the same. Temperature $101\frac{3}{4}^{\circ}$, pulse 98, respiration 19.

May 20th.—Patient feels to-day pretty well; some urine is passing through the wound, but as this is not satisfactory, the catheter is still used with the same frequency. There is no pain in the abdomen; he has had a passage from his bowels, and the tympanites has disappeared. Temperature $98\frac{3}{4}^{\circ}$, pulse 85, respiration 19.

June 1st—Urine began to pass through the urethra last evening, and but a few drops through the wound; patient's appetite has improved greatly, and his digestion is excellent; he complains of nothing except some soreness when he passes his urine.

June 15th.—The patient's condition has improved greatly. He has passed his urine entirely through the urethra for the last two days. Nothing comes through the wound, which looks healthy and almost closed.

June 20th.—The wound has healed entirely, and he is gaining immensely in his general health. He passes now a good large stream through the urethra with ease, and without pain.

June 28th.—To-day the patient was discharged, cured. The calculus was oval in its shape, smooth, and of a pale brownish color, in its broken surface, looked laminated, and in the centre there was a nucleus of about the size of a small marble, and of a dark brown color. Its weight was seven ounces and twenty-three grains, and measured two and one-tenth inches in its longest diameter, and one inch and a half in its shortest, and about one inch and a quarter thick. Its chemical composition was phosphate of lime, with some carbonate of the same, and the nucleus was composed of uric acid.

PERISCOPE.

COLLABORATORS.

Dermatology.—HENRY G. PIFFARD, M. D., Professor of Dermatology in the University of New York.
Diseases of the Nervous System—EDWARD C. SEGUIN, M. D., Professor of Diseases of the Nervous System in the College of Physicians and Surgeons, New York.
Diseases of Women and Children.—FRANK P. FOSTER, M.D., Gynecologist to the New York Hospital Out-door Department.
General Surgery.—EDWARD J. BIRMINGHAM, M.D., Surgeon to Bellevue Hospital Out-door Department.
Genito-Urinary Diseases and Syphilis.—ROBERT W. TAYLOR, M.D., Professor of Dermatology in the University of Vermont.
Orthopedic Surgery.—NEWTON M. SHAFFER, M.D., Surgeon to the New York Orthopedic Dispensary and Hospital.
Practical Medicine.—E. DARWIN HUDSON, JR., M.D., Professor of Practice of Medicine, Woman's Medical College, New York.

THE AUTOMATIC METHOD OF REDUCING LUXATIONS
OF THE HIP.

BY

ALPHEUS B. CROSBY, M. D. (*Phila. Med. Times*, June 23d, 1877, and *N. Y. Med. Jour.*, July, 1877),

AND

S. J. ALLEN, M. D. (*Ohio Med. and Surg. Jour.*, October, 1877.)

IN October last there was admitted to his wards, in Bellevue Hospital, a typical case of dorsal luxation (the toes resting on the opposite instep, there being very marked rigidity present, and abduction being entirely impossible), but which had been diagnosed as one of fracture of the neck of the femur within the capsule, by a physician outside, and treated as such for about thirty hours previous to admission. Under these circumstances he resolved to at once adopt the following plan: The patient having been placed on his back upon a blanket spread upon the floor, was thoroughly anæsthetized, in order to obtain complete muscular relaxation, and the legs were flexed at a right angle upon the thighs, and the thighs similarly flexed upon the pelvis, for the purpose of removing the strain from the ileo-femoral or Y ligament. Dr. Crosby then placed his hands under the calves of the legs, quite near the knees, and, raising the pelvis a short distance from the floor, made very slight abduction of the affected limb, when, in about half a minute from the commencement of the manœuvre, he had the satisfaction of feeling the head of the bone slip into its normal position. He explained that in this procedure the patient was made to perform the reduction himself, a sort of *felo-de-se*, as he termed it, the weight of his body supplying the extension, while the counter-extension was made by the operator, who performed simply the office of a post, though an intelligent one, to be sure. The method was first described to him by a friend of his in Vermont, Dr. S. J. Allen, who had hit upon it accidentally about two years ago, while in the act of lifting a patient suffering from this dislocation, so as to get him into a suitable posi-

tion for performing the usual manipulations attempted for the reduction of the deformity. Since then he has adopted the same course, with equal success, in two other similar luxations, so that Dr. Crosby's makes the fourth case in which the procedure has been employed. So far as Dr. Crosby has been able to ascertain, these are the only cases in which it has ever been done. In Dr. Bigelow's admirable monograph on luxation of the hip (a copy of which, strange to say, he found it difficult to lay his hands on in New York), he has found that the same position was used in a number of instances there recorded, but the method pursued was always different from that which he had ventured to call the automatic. (*Philadelphia Medical Times*.) Dr. Allen, in his report, adds another case, and repeats the views so ably presented by the late Prof. Crosby, without, however, even mentioning his name in connection with this simple and efficient method of reduction. To Dr. Crosby belongs the honor of having first given this method to the profession.

E. J. B.

PERSPIRATION IN SKIN DISEASES.

BY
MONS. AUBERT. (*Le Progrès Medical*, 1877, p. 679.)

THE author has studied the effects of cutaneous disease in modifying the perspiratory secretion. He made use of the following simple procedure : A piece of white paper is applied to the skin, and maintained in contact a few minutes. The sweat, as it issues from the follicles, slightly moistens the paper at points corresponding to their orifices. A dilute solution of nitrate of silver is then brushed over the paper, and the nitrate becomes converted into a chloride from the chloride of sodium in the perspiration. The chloride of silver blackens upon exposure to light, in this way mapping out the distribution, etc., of the sweat-glands. With the aid of this test-paper he has studied the secretions in nævus, ichthyosis, pelade, erysipelas, scabies, lupus, favus, herpes, psoriasis, etc.

Aubert's observations enable him to state that, as a rule, irritations of the skin completely suppress the perspiratory secretion, and that after their disappearance some time elapses before the secretion reappears. In cicatrices many of the glands disappear, but those which remain secrete more profusely than before.

H. G. P.

PROGRESSIVE PERNICIOUS ANEMIA CURED BY ARSENIC.

DR. BYRON BRAMWELL (*Medical Times and Gazette*, Sept. 22, 1877) reports a case of progressive pernicious anemia, treated and cured by arsenic, at the Newcastle-on-Tyne Infirmary. I. D., age 38, a chemical worker, admitted Nov. 26, 1875. Extreme shortness of breath, pal-

pitation, swelling of feet, hands and face, and general debility. Sickness began seven months previously with rigor following exposure to wet and cold, weakness and pallor progressive, hair had grown grey, vomiting and frequent diarrhoea. Fourth month, slightly jaundiced, muscles became soft, giddiness and faintness on movement. Loud blowing murmurs at all the cardiac orifices, mitral most marked; venous hum on both sides of neck. Pulse 76, full, jerking, and of low tension. Tongue clean, moist and pale. Liver dulness normal, splenic dulness slightly increased. Urine normal quantity, pale, neutral, Sp. Gr. 1,020, no albumen or bile. Headache, singing noise in left ear; sight dim, pupils widely dilated, but sensitive to light, fundus bloodless, no retinal hemorrhages. A drop of blood showed no increase in number of white corpuscles, but great variety in size, symmetry and form of red corpuscles, oval red cells and irregular contour and processes being noticeable. Treatment by iron, quinine and phosphorated cod-liver oil, without benefit; grew steadily weaker, and retinal hemorrhages developed. Was put upon liquor arsenicalis two minims three times a day; steadily improved; was discharged January 26th, 1876, and treated as an out-patient until cured.

E. D. H. Jr.

ABOUT BOOKS.

Wood's Physician's Vade-Mecum and Visiting List. Philadelphia, 1878.
J. B. Lippincott & Co.

THIS little book is intended to be carried in the physician's pocket, and to serve as a record of his daily practice. The arrangement of that portion devoted to accounts of visits, etc., we do not like quite so well as that in the corresponding volume of Lindsay & Blackiston, but this contains, in the front, a useful collection of facts that it is very handy for a physician to have about him. The most prominent of these are a list of poisons, with the symptoms produced by them, and their antidotes, a list of doses, and a number of diagrams, with explanations, showing the motto points on the cutaneous surface at which to apply the poles of a battery for electrization. In No. 15 of this Journal, in reviewing Dr. Dunglison's *Practitioners' Reference Book*, we took occasion to condemn all vade-mecum compilations, but in this instance we must make an exception. Here the material is short, intended to be carried about and referred to when no other source of information is available, and applicable only to emergencies. We may quote from the author's preface, to show his intention: "In the printed matter it is not intended to supply lack of education on the part of any one, or to replace larger books. The most highly educated persons, as well as the ignorant, are liable to forget, and knowledge which has lain unused for many years may be so covered up that it cannot be found in a sudden emergency. Thus, a physician may not

have seen a serious case of poisoning in twenty years of practice, and yet the life of a patient may suddenly depend upon his prompt, immediate, and skilful attention. It is to remedy this forgetfulness in an unexpected emergency, to which all human beings are liable, that the preparatory matter is intended."

Outlines of Modern Organic Chemistry. By C. Gilbert Wheeler, pp. 231. New York and Chicago : A. S. Barnes & Co., 1877.

In this work the author endeavors to give an outline of the most important facts in organic chemistry. This science, which, during more recent years, has assumed gigantic proportions, is most imperfectly taught in all our medical schools, and, we may add, is not at all understood by perhaps more than one in a thousand of medical students. It needs no argument to sustain the assertion that medical men should at least possess some ideas on this subject. The reason for the vast amount of ignorance that prevails may be found in the fact that the science, though of comparatively recent growth, is composed of such an immense number of perplexing facts and bewildering details that it has hitherto been impossible to give them definite shape in a small compass. The present work will be found an invaluable aid to those who may desire to obtain information from a concise, intelligible, and, at the same time, thoroughly reliable source. As a text-book for the student, we may say, without hesitation, that it is the simplest and most compact work we have seen, and, as a guide for the course to be followed by a teacher, it is excellent. It is not often that we can so heartily recommend a text-book as in the present instance.

The typographical execution of the work must not be left uncommended. Although, at the present time, scientific works are so generally gotten up in handsome style, this volume is not excelled by any in elegance.

THE HOSPITAL GAZETTE AND ARCHIVES OF CLINICAL SURGERY,

A Semi-Monthly Journal of Medicine and Surgery,

EDITED BY

Edward J. Birmingham, M. D., and Frederick A. Lyons, M. D.

VOL. 2, No. 9.

NEW YORK, NOVEMBER 15TH, 1877

WHOLE NO. 18.

CONTENTS.

EDITORIAL.

	PAGE.
Eclecticism and the <i>Virginia Medical Monthly</i>	273

LECTURES.

Lectures on Paralysis and Convulsions as Effects of Organic Disease of the Brain: By C. E. Brown-Sequard, M. D., etc. Lecture I.....	276
Clinical Lecture on Fracture of the Femur: By Frank H. Hamilton, M. D., etc.....	281

ORIGINAL ARTICLES.

Interesting and Instructive Cases in Surgery: From the Case-Book of the late J. S. Thebaud, M. D. (1.) Excision of the Veins of the Spermatic Cord for Circoscele. (2.) Supernumerary Thumb in Adult.....	287
---	-----

HOSPITAL RECORDS.

ST. VINCENT'S HOSPITAL, NEW YORK. REPORTED BY ABRAHAM G. WENDELL, M. D. Post-Facial Abscess Originating in the Iliac Fossa.....	290
---	-----

PERISCOPE.

WILL on a Case of Psoriasis treated by Chrysophanic Acid. (Dr. PIFFARD.)	293
SQUATZ on Psoriasis treated with Phosphorus "Perles" and Chrysophanic Acid. (Dr. PIFFARD).....	294
HOWELL on Copalba as a Diuretic. (Dr. Hudson).....	295

ABOUT BOOKS.

A Manual of Physical Diagnosis: By F. Delafield, M. D., and C. F. Stillman, M. D.	296
--	-----

EDITORIAL.

ELECTRICISM AND THE "VIRGINIA MEDICAL MONTHLY."

FOR many years past there has been an institution in Philadelphia at which medical diplomas could be obtained, either by writing for them or applying in person, provided the money was paid. So flagrantly has this institution conducted its traffic, and so frequently have its diplomas been found abroad, that it has become almost a doubt in the minds of Europeans whether any American diplomas were anything but *purchasable*

parchment. In the issue of THE HOSPITAL GAZETTE for October 15th, we were enabled to trace home one of these diplomas, and we stated where one of them had been seen. At the same time we pointed out to some of our fellow-journalists that they had been made innocent victims, and had admitted to their columns long articles on the virtues of a "Glycerite of Kephaline," which were in reality nothing but the advertisements of one of the professors of this college. We had supposed that when this exposure was made, and the facts furnished, all who had been innocently victimized would immediately make all the amends in their power. Such has been the case with most of the journals; but one, the *Virginia Medical Monthly*, Landon B. Edwards, M. D., editor, has taken just the opposite course, and instead of noticing our article, or making inquiry of us, if he were not satisfied with our statement, has admitted a letter from this *professor* filled with personalities against us, and, in addition, has prefaced this letter with an editorial defending this "being." The editorial is, if anything, more abusive than the letter; and what makes the whole matter so much worse, is that he allows this fellow to characterize our statements as "utterly false" and "transparent falsehoods," when he does not furnish a single fact to disprove our statement.

We made a statement that a person had seen one of these diplomas that a foreigner stated that he had purchased, and that several other persons were cognizant of the fact. We also pointed out how one of the officers and faculty of this "university" has been making use of respectable journals to advertise in their "original communications" his worthless medicine. We stated that we had had this nostrum analyzed, and that it did not respond to any of the tests of the article which it claimed to be. We pointed out the miserable ignorance in chemistry of this pretender to science, and for these helps to the advancement of the profession, Dr. Edwards accuses us of "very harsh and vindictive criticism," and "because of the unpardonably severe nature of these several publications, should they be untrue, * * * we give editorial publication to the following letter" from Dr. Polk:

"*Dr. Polk and the Regular Medical Profession.*

" 2349 CATHARINE STREET, PHILADELPHIA, PA.

" November 4th, 1877.

"*Mr. Editor:*—It is but just to yourself, and the readers of your excellent journal, who have so kindly and appreciatively received my paper on *Tubercular Phthisis*, that I denounce the charge contained in the HOSPITAL GAZETTE, and that I am connected with the American University, as utterly false. I am not connected with any medical or pharmaceutical school, and am observing, to the best of my knowledge and belief, the Code of Ethics of the American Medical Association. The other statements in the editorial of the HOSPITAL GAZETTE are so transparently false, that I need not discuss them. Yours, C. G. POLK, M. D."

In this letter Polk denies that he has any connection with the American University or other college, and infers by his strong language that it is a disgraceful institution, with which he never had any communication.

We will not state that his denial is "transparently false," but will simply give a copy of an advertisement in the *Eclectic Medical Journal of Pennsylvania*, on the outside cover of which is:—

"American University of Philadelphia."

Department—"University College of Pharmacy.

Officers of the College:

Charles G. Polk, A. M., M. D., Phar. D., President.

Faculty:

Charles G. Polk, A. M., M. D., Phar. D., Professor of Materia Medica."

Another advertisement, occupying the whole of the last page, reads:

"American University of Philadelphia,

Medical Department.

Eclectic Medical College of Pennsylvania,

Sessions of 1877 and 1878,

October 1st, and continues to July 1st, 1878.

Faculty:

Charles G. Polk, M. D., Ph. D., Professor of Surgery, Theoretical and Practical."

Thus, we see, in spite of Polk's denial, and in enlightenment of Dr. Edwards, that Polk is president, and one of the faculty of this "university," for the session 'till July 1st, 1878. No resignation of yesterday, or dismissal of the day before, would change the character of his position, and his statement that he is "observing, to the best of my knowledge and belief, the Code of Ethics of the American Medical Association," is but another of his attempts at fraudulent representations.

After all there is some extenuation for Polk; there is but little for Dr. Edwards. Polk has been in the habit of living by the same means, thinking in the same manner, making use of all that he could grapple into his net, as the other members of the "university" have done; he is but following out his instincts; but Dr. Edwards is a gentleman, the editor of a respectable journal, and he ought to know better than to accuse his professional brethren of publications known to be untrue. No one, quicker than Dr. Edwards, would feel offended at the same language. Dr. Edwards, also, has not weighed the prestige that such an abusive editorial as his will give to "Professor" Polk. Again, Dr. Edwards, in his editorial, gives full credence to what Polk affirms, in preference to what others, better informed, say; he says: "Dr. Polk affirms, upon what seems to us sufficient evidence, that glycerite of kephaline is useful, etc., and before we can regret having made the publication, it is to be proven that Dr. Polk's facts are all fancies." Where are the facts? Only the statements that have been made by Polk himself in his "original communications" to his innocent victims, whereas Dr. Edwards includes the *Philadelphia Medical Times* in his "very harsh and vindictive criticisms," and in that journal for Nov. 10th is an *exposé* of Polk's utter ignorance of the chemistry of the brain compounds.

In Dr. Edwards' editorial we have Polk's denial to our charges. We expected nothing less. What are these denials worth? Do they prove anything but what we before stated, that Polk was living a life of

plagiarism and falsehood? Will Polk pretend to deny that his name was attached to the diplomas of "The Medical Department of the American University of Philadelphia?"

What has Dr. Edwards to say? He cannot, we think, but by this time be fully aware of Polk's position. Will he give to each of his "very harsh and vindictive" critics the *amende honorable*?

—♦♦♦—

LECTURES.

LECTURES ON PARALYSIS AND CONVULSIONS, AS EFFECTS OF ORGANIC DISEASE OF THE BRAIN.

Delivered at the Bellevue Hospital Medical College.

BY
C. E. BROWN-SEQUARD, M. D. ETC.

The following lectures are not presented as a *verbatim* report. They have been somewhat condensed in order to economize space, being of too great length to be published in full in the journal.

LECTURE I.

GENTLEMEN:—In the beginning of the course of lectures that I shall now have the honor of delivering to you, it is important that I should say that there are two kinds or types of manifestations of cerebral disease. There are two sets of absolutely distinct manifestations of cerebral lesions, which can, however, be brought, and moreover ought to be brought, to one common type. The first variety consists in the immediate stoppage or arrest of a function, or of any activity, and the other set consists in exactly the reverse, *i. e.*, the setting in play of an activity, or the increase of a function. The difference lies, then, in the state produced in an activity or a function. In one case there is an inhibition, an arrest; while in the other there is the setting in action of a power, or a function. But, as I will try to prove hereafter, there is an element common to both these conditions. The first is identically the same as the second, as regards that element. A cessation of activity depends upon one and the same cause, as a stimulation of activity. In both instances an irritation starts from the place of a lesion in the brain; it is forwarded to cells at a distance, and there acts on these parts so as to stimulate them to act, or to inhibit their activity. So a hemorrhage in the brain, irritating the part where it is, causes, through the propagation of that irritation, to cells at a distance either convulsions or paralysis, or both successively, *i. e.*, an action, or the cessation of an action. We have to deal in reality with one great source of difficulty; we have to recognize only one kind of disturbance. There are, in truth, no varieties, and it is most important to recognize this view, not only to satisfy our minds in regard to the explanation of the phenomena that occur, but also because it leads to a rational system of therapeutics; and I may say at once, as a sort of preface, that these therapeutic means, which are in accordance with what I state, will, in a short time, become more fully developed; some of them have already been fully proven, and others will follow.

Before going further, I will add that in our time the means of treatment of brain diseases have made a wonderful start, and are rapidly improving; and certain facts, which I shall have to relate further on, prove this assertion. The mere application of a plate of metal to the body, or the passage of a galvanic current, is known in many cases to produce wonderful results. If you see a case of epileptiform convulsions, before the loss of consciousness has occurred, it may be arrested at once. An immense new field is open to us; we have to deal with a means of treatment which, if properly applied, produces results of an exceedingly interesting nature. It will cause the cessation of paralysis and convulsions in a most miraculous manner. I do not wish to convey the impression that we have as yet arrived at perfection in this new method, but the field is very broad, and stretches open before us.

I now come to the point of this lecture, which, I will remark, is merely introductory to what will follow. All the facts with which we are acquainted, as regards paralysis and convulsions, may be explained most easily and naturally by a theory that I shall bring forward, while they are in direct contradiction with the old theories which have hitherto been held. When you see a patient attacked with paralysis on one half of the body, as, for instance, paralysis on the left side, with slight paralysis on the opposite side of the face, and a series of other symptoms, according to, the old theory the disease must be situated somewhere in the pons Varolii. With a lesion situated in the same locality, we might have a paralysis on the right side of the body and the left side of the face; or, again, the whole body might be paralyzed completely. In this case we have to deal with an affection of the base of the brain. We may have a paralysis depending on a lesion on the same side of the brain. In one case we have paralysis on the right side, in the other on the left, but the seat of the disease is the same in both instances. In one case it causes paralysis on one side, in another, on the other. Now suppose a third patient comes to you with disease in the same part; he has paralysis only in the lower limbs, with none whatever in the upper; the face is paralyzed on one side, and the orbicularis muscle is also involved. You see the contradiction of these three cases, and you will hesitate in forming an opinion, unless you know that, when disease exists in one part of the brain, paralysis may occur on the same side of the body. If you were not led by this knowledge, you would not make a diagnosis.

You may have still a fourth case. A patient may have total destruction of the pons Varolii, and no paralysis whatever in the limbs, though there may be some in the face. You would be at a loss to locate the lesion unless you knew that destruction of tissue can exist without producing paralysis in the least degree. You could not arrive at a conclusion on the subject unless you were aware that a disease can exist anywhere in the brain, and produce entirely different symptoms.

I am fully cognizant of the fact that the views I am to criticise are those that are held by most at the present time. These views have been founded on a series of facts which it is not necessary at present to ennumerate. After these opinions had been put forward, it was discovered

that the fibres of connection decussate in the upper portion of the spinal cord. It was observed that a lesion in one-half of the spinal cord produced paralysis in the corresponding side of the body, and a disease of the brain produced paralysis on the opposite side. I have no hesitation in saying that these ideas are absolutely and radically false. Paralysis does not depend on the destruction of a nerve centre or of a conductor. The most that can be said is that it does so depend in some cases only. If you take away the whole brain, of course you will get paralysis, as there is entire loss of sensation, and you have taken away the centres of the voluntary will-power.

In the first place let us see about the decussation in the spinal cord. The facts which lead to this view are two: The first is, that section above this point produces paralysis on the opposite side; and the other is, that destruction of tissue, down to the anterior pyramids, likewise produces paralysis on the opposite side of the body. These experiments were instructive, but there are others which overthrow them. I have been able to ascertain that the anterior pyramids can be cut without a trace of paralysis. Both of the anterior pyramids can be cut, and no paralysis follow. If the anterior pyramids, then, are employed as conductors between the will and the muscles, they are certainly of secondary or very slight importance, if the connection exists at all. Now comes a difficulty which Schiff has tried to solve. He endeavored to show that the decussation takes place in the pons Varolii. There are cases in immense number of disease of one-half of the pons Varolii, in which paralysis existed on the same side. Destruction of the whole half of this portion of the base of the brain has produced paralysis on one side only, whereas, if decussation existed here, the conductors from both sides would be destroyed, and paralysis of both sides of the body would result. I have collected thirty-two or thirty-three cases of destruction of one-half of the pons Varolii, which should produce complete paralysis on both sides, but has not done so. We cannot, then, admit that decussation takes place either in the pons or medulla oblongata. In the next lecture I will show that decussation takes place in the spinal cord. There is no doubt that one-half of the brain has a great power of action on the other half, through the anterior pyramids of the medulla and the pons Varolii. It is simply a power of changing the action of the cells in the spinal cord, and not a paralyzing influence.

Change in nutrition of cells produces paralysis in most cases. In disease of certain parts there is a transmission of the degenerative changes to the opposite side. In the posterior part of the lateral columns decussation occurs. A great alteration takes place in distant parts, by producing irritation in any one part. We can produce, at will, epileptiform convulsions in guinea-pigs, by irritation of certain points. A change of nutrition takes place very rapidly in the opposite side from that in which the injury is made. In all the organs of the body a change may take place in one side from irritation or injury of the other, and the same thing occurs in the nervous system. The irritation is propagated from one part to another. In some cases there is stimulation of function, and in other cases there is loss of function.

If we cut one of the posterior columns of the spinal cord, we will get loss of sensation on the same side; if we simply prick it, we may get the result on both sides. We may, by the apparently lesser injury, get more extended effects. The prick produces irritation, and the power of irritation is immense. If you look upon the fact in its proper light, you will find that the irritation may spread according to the idiosyncrasy or individuality of the animal. A simple irritation, such as that produced by a prick, may have an immense variety of effects. If such an irritation is produced in the brain, the animal loses the power of will, and all the cerebral activities are arrested. There may be an inhibition, if you choose to call it so, of most of the activities of the brain and spinal cord. The irritation must be diffused so as to stop the activities of the cells. A stoppage of the heart's action may be caused by irritation of the inhibitory centre. I think we may admit that paralysis is a mere arrest of the activity of cells. If you irritate different parts of the brain you may get a general paralysis, as sometimes exists in what is called general paralysis of the insane. You get a cessation of the power of vision, by pricking the optic nerve on the opposite side. We may see, by irritating certain nerve cells, great alterations in the lungs; in one case a hemorrhage, in another a different change, and so on. Hemorrhage of this nature is not unfrequently produced, as in the case of a certain gentleman in Philadelphia, the founder of a large institution there, who died from a hemorrhage in the lungs, produced by an irritation of cells in the pons Varolii. In animals we can produce this effect at will.

I will say, to complete the idea, that I shall try to prove that paralysis may occur from an activity of the inhibitory cells, and also from an alteration in the nutrition of parts. The mal-nutrition may occur, not only in the cells of the spinal cord, but in the nerves, muscles, and every part of the system. The first cause, then, is inhibition, and the second, alteration of nutrition; and, if you ask why a paralysis may occur on the side opposite to a lesion, the answer is, that it will cause an alteration of nutrition on the side opposite to the primary irritation. There is no difference between the kinds of paralysis or convulsive movements, whether the disease be epilepsy, chorea or catalepsy; all of these movements can appear on either side of the body indifferently. The theories generally admitted are certainly false, as we have shown that paralysis may appear on the same side as the causal lesion.

There is still another fact of importance: If paralysis depends, as is supposed, on a destruction of centres or conductors, we would not find, as in most cases, that paralysis of the same muscles, or groups of muscles, can be produced by lesions in widely different situations. The common type of hemiplegia, from brain disease, will come on, no matter in what part the lesion may be. We cannot admit that the nervous centres are situated in different places in different individuals; and how can we explain the reason why lesions, in different localities, should produce the same effects? Take the crura cerebri, which consist of the motor fibres coming from their centres. In disease of these parts, we should have the paralysis located in certain muscles, according to the seat of the disease, according

to the fibres implicated. But we find, on the contrary, that, whatever the seat of the disease, the muscles affected are the same in every instance. In two hundred and sixty-nine cases of paralysis of the arm, a lesion was found limited in a certain place: the ascending frontal convolution. Now, if the conducting fibres, in connection with the two ends of the nervous route, remained isolated at the base of the brain, a disease in the centres would always produce paralysis of the arm. In point of fact, it is found that such a lesion may produce paralysis of the leg, or no paralysis at all, or paralysis of the whole body. Now, if the centres of motion for the arm are seated in the anterior ascending frontal convolution, paralysis must be produced by irritation, for I have collected forty cases in which disease of the posterior lobe produced paralysis of the arm; and forty cases, also, in which the disease was situated in the frontal lobes of the same side. In other cases, again, disease situated in other portions produced the same symptoms. We cannot admit, as I mentioned before, that the motor centres are situated in different locations in different individuals; so that there are no grounds whatever for deducing from a number of cases of paralysis of certain portions of the body that the centres for the paralyzed muscles are situated in the place of the lesion.

My former pupil and assistant in London, Dr. Hughlings Jackson, has tried to show a relation existing between particular forms of convulsions and lesions in particular spots. He endeavored to show that irritation of the convolutions surrounding the corpus striatum produced convulsive movements on the opposite side of the body. In a paper recently published, I gave more than one hundred and sixty cases of a lesion of one side of the brain producing convulsions on the same side of the body. According to old opinions, we ought to find the convulsions occurring on one side from lesion of the opposite.

There are a great many facts that go to prove that all the old views are entirely wrong. I will only say at this time that an irritation is propagated by fibres from one side to the other. In cases where there is disease of both sides of the brain, the convulsions may appear in only one side of the body. We often see, in a great many cases, an irritation in some part of the system produce effects in a part at a distance. Thus, you take a number of persons coming out of a warm theatre into the cold air, with a portion of the neck exposed; the cold draught, striking the same part of the body, and causing an irritation, may, in one person, produce a pneumonia, in another a peritonitis, in another an inflammation of the bladder, in another a simple cold in the head, and so on. The same irritation in the same part is the sole cause in the whole number of cases, but the results produced are infinite in variety. As you see, the effects vary according to the idiosyncrasy of the individual. So in brain affections, which sometimes appear on one side and sometimes on the other, producing paralysis either on the same or on the opposite side of the body. When you accept these views, that the effects appear, not because there is a loss of function, but on account of an irritation; when you admit that the old views are wrong, you can explain all the phenomena.

that occur, and you will be ready to adopt the plans of treatment I will describe, and apply them successfully.

I have now but a few words to add to what I have already said. If you examine what takes place in the phenomena of brain disease, it will lead you to think that the brain is independent. Only a very few fibres of connection between the brain and spinal cord are sufficient. It has been assumed that, as regards the power of the action of the will on the muscles, the brain must be considered as the keys of a piano. When the will acts to produce a movement, it was supposed to act upon the nerves, as the fingers upon the keys. This cannot be so, as the fibres of connection between the brain and the spinal cord are very few in number. There are many cases where great destruction of tissue takes place without destroying the conductors. The will-power acts by a sort of telegraphic communication in producing its effects.

I will simply say here, although I cannot as yet give proofs, that there are other powers of the intellect besides the ordinary mental powers. These latter are extremely limited, and cannot reach beyond a certain point. But there are those among you, gentlemen, sitting in the seats before me, who, perhaps, one of these days, will make some discovery or invention that will make a revolution in our theories and practice. There are those who have the gift of genius, which is superior to the ordinary mental powers. Discoveries are made, not by the ordinary mental powers, but by something above and beyond them. The former puts a question to the latter, and it sends back the answer. We see this illustrated on certain occasions, when we are endeavoring, with all our powers of concentration, to recollect a name that we have forgotten, when, suddenly, when we are not thinking of it, the name returns to our memory. This is due to the action of that power of which I have spoken, which is beyond the ordinary mental powers.

The will-power acts on the nerves by a sort of telegraphic communication, and does not act on special muscles at one time, but produces variety and complication of movements at the same time. It never gives an order in this way: "I wish this muscle to act." Those who use their muscles the best, and with the greatest effect, are never conscious of their doing so.

CLINICAL LECTURE ON FRACTURE OF THE FEMUR.

Delivered in the Amphitheatre of Bellevue Hospital, New York,

BY

FRANK H. HAMILTON, M. D., Surgeon to Bellevue Hospital, etc.

GENTLEMEN:—I have to-day entered upon my duties at the hospital, and shall be pleased to show you, from time to time, the cases under my care. I shall to-day show you some cases of fracture of the femur which have united, or are uniting, under the plan of treatment that I have successfully used for the last few years. I shall show you these patients,

in order that you may understand the peculiarities of our practice, and see the points of difference that may exist between it and other methods of treatment now in use.

In order that you may fully appreciate what I shall have to tell you, it is necessary that I should call your attention to the progress that we have made in the treatment of this injury during the last century. In doing this, I shall limit myself entirely to the consideration of fractures of the shaft of the bone, not including fracture of the neck or of the condyles, and, furthermore, my remarks will be confined to fractures occurring in adults. The treatment of fractures of the neck and condyles and of the shaft in children, requires special consideration, and I wish to speak now of the general management of fractures of the shaft in adults.

First, then, I wish to remark that fractures of the shaft of the femur are almost always oblique, so much so that it almost never happens that we can set them, in the ordinary acceptation of that term. They are almost invariably so oblique that, unless we can manage to keep them constantly in position by means of extension and counter-extension, the fragments will override each other to a considerable degree. These specimens which I have brought here to show you, will illustrate this fact very nicely. There will always be as much extra thickening as you see in the bone that I hold in my hand, unless you can overcome, by some means, the force of the powerful muscles that cause the displacement, for two, three or four weeks. In any case there will always be as much projection as the thickness of the shaft of the bone. You will observe the same thing in this specimen, though the fracture was higher up in the bone. There is a distance of four inches between the points of the fragments. You see at once that there can be no such thing as setting. The ends of the bone may be placed in a favorable position, and held there, but they will never hold themselves. In this instance, although extension was made, and plaster of Paris applied while the patient was under chloroform, you see how much shortening there has been. The patient died a few years after the injury, and, on autopsy, it was found the shortening was as much as could be permitted to take place. The lower fragment had overridden the upper until it had ascended as high as the neck of the bone, which would allow it to go no further. In this third specimen, also, you see the overlapping of the fragments, but here you see, likewise, that there was an extraordinary proliferation of bone.

Here, then, is the question that confronts you in the beginning: How is the tendency to overlap to be overcome? Not by setting and bandaging, because the muscles act too powerfully to allow the fragments to be held in place; lateral supports would not be sufficient, as this method would not prevent shortening. How, then, I say, are we to overcome it? Until the latter part of the last century all surgeons employed a straight splint, simply pulling the limb out, and binding a long splint to it. This method is illustrated by the splints I now show you, that were given to me by a surgeon who served under Stonewall Jackson. It is a simple and practical device, and was employed by the surgeons who followed that great commander. It was the only device which could be

employed and conveniently conveyed by an army moving only on horseback. Essentially this plan of treatment was followed up to the time of Pott, of England, who wrote a brief essay on fractures, declaring that hitherto fractures of the thigh had always united with shortening; but he suggested an improvement on the old plan, which was soon accepted by English and American surgeons, but not by the French and Germans for some time. This improvement was the flexed position, and it soon became known as the position of the double-inclined plane. His theory was a specious one. This plan of treatment by the double-inclined plane or flexion has its advocates up to the present time. In the United States it has been adopted chiefly by Dr. Nathan Smith and his son, and by Dr. Hodgen, of St. Louis, each one of whom, however, employs also suspension. There are, as I have said, a few leading surgeons who use it still to-day, but almost universally we have returned to the straight position.

There have been many forms of splints for the straight position. There was Boyer's apparatus, in which there was a screw at the bottom, to pull the leg down. Then there was Dessault's modification, and after these there have been an almost inexhaustible number. There are no less than thirty or forty that I could mention. Here is one with a screw working inside of a box, and a strap to attach to the foot. Here is one invented by a Canadian surgeon, which has a screw at the bottom, and a cross-piece to keep it steady on the bed. This is Bowen's splint. Here is still another; but it is useless to show more of them, there is so great a variety; they are, however, all modifications of the old long splint. Now, how did they contrive to get hold of the foot, in using this form of apparatus? Always by means of a gaiter. Here I show you Gibson's, which, as you see, is well padded, to prevent excoriations. Here is another, which has the virtue of being red, and there are a great many others, all so devised as to prevent, if possible, excoriations of the skin. But, notwithstanding the numerous kinds, there always was ulceration when the extension applied was equal to fifteen pounds. I have seen many of these, sometimes enormous in extent, that have lasted for many years.

Now, in the straight position, besides extension, we must have counter-extension, and our next inquiry must be to see how this was accomplished. It was always obtained by some mode of pressure in the perineum. At first, a long splint, padded, was pressed up in the perineum, and bound to the limb. Then a perineal band was used, flat or round, placed between the thighs, and fastened at the head of the bed, or to the upper end of the long splint. The best of these was a flat pad, of cotton, sewed up in stout linen. But all of these methods were extremely liable to cause bad ulceration and sloughing in the perineum, especially with delicate females. I recollect a case of a man who had an ulceration as broad as my hand, and very deep, that it took a long time to heal, caused by one of these perineal counter-extending bands. So here we were between two evils: first, trouble with the extending band at the foot; and, next, the same difficulty with the counter-extension at the perineum. We were always limited in extension to ten or fifteen pounds, and never could go beyond

it without fear of producing the most disastrous results. At length, Josiah Crosby, of Hanover, devised a method of obviating these difficulties by means of adhesive bands, which took hold on both sides of the leg, all the way up to the knee, and thus distributed the pressure so that it did not fall on any one part. In this way the instep was saved from bearing the brunt of the force, and it was found that an extending weight of twenty pounds or more could be used, and never cause an ulceration. This method was invented twenty-six years ago, and was one of the greatest triumphs of surgery.

As a means of counter-extension, Dr. James L. Van Ingen, of Schenectady, first suggested raising the foot of the bedstead. More than twenty years ago he sent me a letter in which he described his plan. I said, at that time, that it would not do, as he elevated the foot of the bedstead about two feet. I did not believe that it would answer, as the position was too uncomfortable for the patient to remain in for any length of time. The idea, however, was an excellent one, to use the weight of the patient's body as the counter-extending force. Dr. Moore, of Rochester, however, took up the idea, and pretty soon it became generally adopted. It was soon found that it was not necessary to raise the foot of the bed so high, and still gain the object; four or six inches will suffice, and the position of the patient is by no means uncomfortable. It is now many years since I have seen a perineal band in use.

This, gentlemen, is what we have thus far gained in the treatment of fractures of the femur. We have found a means of extension by which we can apply twenty to twenty-two pounds of force, and the same with counter-extension. We are now speaking of the injury as occurring in adults; when the patient is a child, we do not need so much force. In placing the patient in position, the pillow must lie under the head only, and always away from the shoulders; otherwise, we can only utilize the weight of the pelvis for the counter-extending force.

Now, why is it that we can only use twenty to twenty-two pounds of extending weight and no more? The reason lies in the fact that the force must be limited by the ability of the ligaments around the knee-joint, and especially the posterior ligaments, to bear the force of extension, and these cannot bear a greater amount of extension. The pain produced by the stretching first begins behind, as these ligaments are not accustomed to tension. In the normal position the posterior ligaments are not put upon the stretch. We never stand perfectly straight, and if we try to do so for a moment, the tension upon the posterior ligaments causes pain. When we apply the extension apparatus, we are pulling upon ligaments that are unaccustomed to a strain. Some individuals will endure twenty pounds, and some even twenty-five pounds, but the last is excessive. My rule is to apply the extension at first very moderately, and add to the weight until the patient cries *pccavi*. These, then, are the steps of progress, and they are easily marked.

A few years ago, under the suggestions of the German surgeons, to whom we owe many improvements in surgery, we began to use plaster of Paris; but this was a step backward, instead of forward. By this method

we cannot get the slightest extension or counter-extension. The limb shortens as much as it is possible for it to do, and you can easily see the reason. If you put the plaster all the way up to the perineum, and endeavor to use that as a point for extension, you will get ulceration. In one case I saw an enormous ulcer as the result of this. If you do not use the perineum as the means of obtaining the extension, you have to use the oblique surface of the thigh and the curvature of the nates. In a small man this amounts really to nothing, and the consequence is, that the plaster rapidly loosens, and you have not the slightest extension or counter-extension. While the plaster method was being used in this hospital, I saw more shortened and more crooked legs than there ever were before, and, besides that, I saw three deaths. Taking it all in all, so far from making progress were we, in adopting this method, that we actually took a retrograde step; and I am happy to say to-day that the practice is now almost entirely abolished. I assure you that you will never use it more than twice in country practice. I speak of it, not in order to advise it, but I am obliged to refer to it, because it was once getting into extensive use.

But let us see what we use now. Look at this patient and you see the limb held closely by adhesive plaster, and fortified by a bandage, and to the foot-piece, which is clear of the malleoli, is attached a weight, acting over a pulley. This method is sometimes called Buck's extension, but it was not his invention any more than mine, nor mine more than any other person's. With this mode we ought not to get above three-fourths of an inch of shortening, and I so stated when I first published my book. In this case, you see, there are two cords and weights, one on each side of the foot-piece. This is a device of my assistant house-surgeon, Dr. Munroe, and is designed to prevent rotation outward of the limb, which it does very nicely.

You might suppose that extension would keep the bones from uniting, but this is not at all so. So long as I have treated fractures of the thigh, and it is now nearly forty years, I have never yet met with a case of non-union in my own practice. I have seen such cases in the hands of others, but it has never yet been my misfortune to have a case of the kind of my own, although I have often seen them nine weeks in uniting.

In this second case that I point out now, as you see, a silicate of soda bandage has been used, but it is entirely unnecessary. On this patient we have used a contrivance of Esmarch, to prevent the outward rotation. The leg is settled in a pad, with a broad under-rest, which is fastened to a cross-piece, steadied on a frame, but slides slightly up and down. We have just begun to try it, and cannot, as yet, form a definite opinion of its value.

In this case you see everything that we generally use, and that is called Buck's extension apparatus; but, as I previously remarked, although we are indebted to Dr. Buck for many practical points in the treatment of fractures, and especially of this fracture, the credit of its invention does not belong to him. It may, with most propriety, be called the American plan exclusively. The extension is made by one pulley and weight. Dr. Buck used an upright piece of wood, with a pulley fastened in, and this was fixed to the foot-piece of the bed. The weight may be anything

that is convenient—a stone, a brick, a flat-iron or a bag of shot." Instead of the wooden upright that we formerly used, we now simply employ an iron wheel, which is fastened to the bed with screws. The foot-piece to which the cord is attached must be quite broad, so that the adhesive plaster will not press on the malleoli. The plaster is laid only up to the knee, and not on the thigh above, for, if it is, it may do as much mischief as good. Then the plaster is held more firmly in place by a bandage. It may give a quarter of an inch or so, but never entirely. This method was first described, as I have before said, by Dr. Crosby, of Hanover, New Hampshire.

Over the fracture itself we should place four short side-splints, so as to nearly encircle the limb. The best material for this purpose is felt, made of several thicknesses of cotton cloth, secured in place by five or six separate pieces of bandage. We can thus open and inspect the fracture a dozen times a day, if we choose. To prevent eversion, we use a long splint, which will run along the entire length of the body, and hold it in an unchanged position, and I regard this long splint as one of the most essential things in the treatment. Its utility is twofold: *first*, in preventing eversion, and, *secondly*, preventing bending outward at the point of fracture. The small splints are placed inside the long one. This, then, is the model splint, the perfected method. Let us for a moment recapitulate its elements. Extension is made by weight and pulley, and the attachment by adhesive plaster. We have four short splints, a long splint, and the counter extension is obtained by utilizing the weight of the body, by raising the foot of the bed.

In the plaster-of-Paris method we always used to find that, at the end of a week or two, the dressing had become loose. We had then to open it, and cut out a piece, in order to bind it tighter, and when we did this, it would not lie evenly on the leg; it did not fit, so that we were obliged to take it off entirely, and apply a new one. This was a prodigious labor. In this case my house-surgeon has put a limb up in plaster, in order to show you the method. It must go below the ankle, to get extension, and above the pelvis, for counter-extension; but it gets loose in a very short time, and the fact is, that we do not get either the one or the other.

Now, in regard to measuring a limb, I will say a few words: There is no difficulty in getting the length accurately; at any rate, we can get it with certainty up to one or two-eighths. I do not measure from the round edge of the anterior superior spinous process of the ilium, but get my finger under it at the insertion of the tensor vaginæ femoris, and press. From this point I measure to the external malleolus.

Dr. Jarvis S. Wight, of Brooklyn, in a paper published in the *ARCHIVES OF CLINICAL SURGERY*, by a number of measurements made on healthy individuals, attempts to prove that nearly every person has naturally a shorter limb on one side than on the other, and that often, after fracture, we find apparent shortening where there is, in reality, none whatever, the fracture having taken place in the already short limb. This cannot be so, for in nine out of every ten cases of fracture of the femur we do get actual shortening; and how would this happen so constantly if the fracture had occurred in the longer limb?

ORIGINAL ARTICLES.

INTERESTING AND INSTRUCTIVE CASES IN SURGERY.

From the Case-Book of the late J. S. THEBAUD, M. D., Surgeon to St. Vincent's Hospital,
Colored Home, etc.

EXCISION OF THE VEINS OF THE SPERMATIC CORD FOR CIRSOCELE.

C., aged 23 years, the son of a physician, consulted me during the summer of 1855 for an enormous cirsocele. The veins of the cord had been enlarged, and gradually increasing for thirteen years. I found the patient of a melancholy disposition, with great depression of spirits, and exceedingly unhappy; he was suffering with nocturnal emissions, occurring three or four nights in succession, and often twice and three times of the same night. His memory was failing, and he was losing all interest in his business, while becoming daily more reduced; he also suffered much with chronic rheumatism. He had been under the care of several physicians, but had obtained no relief. I at once concluded there was no further room for palliative treatment, and, without hesitation, proposed recourse to a surgical operation.

I saw no more of my patient until the winter of 1856, when he again called at my office, to consult me in regard to his case. He had not improved; on the contrary, he was pale and emaciated, and complained more than ever of his emissions, which now occurred at all times; of pain in his back and limbs, excessive debility and despondency. He declared that his memory was now so bad, and that he was so unfit for work that he would abandon his situation, unless relieved of the trouble which tormented him so much; he had become desperate, and was now willing to submit to any operation which I might propose, regardless of the risks attending it, more especially as he had been in the interval mostly engaged in pursuing different varieties of treatment, suggested by friends and professional men, without the slightest relief.

On exposing the parts, the scrotum had nearly doubled in size since I had last seen it, extending to the middle of the thigh, and supported by a large suspensory bandage of his own contrivance. The right testicle was crowded up against the external abdominal ring, while the left, which was on the side of the cirsocele, was soft and flabby, and almost imperceptible among the numerous convolutions of veins by which it was surrounded.

I again proposed an operation, and advised in this case the complete excision of the veins, after ligating them below the ring. He willingly consented to the operation, though I warned him of its dangers, of which he was already fully aware, from the fact that two of his friends, suffering from the same affection, had been operated

upon by eminent surgeons of this city, one by excision, losing his life; the other by subcutaneous ligation, where violent hemorrhage ensued during the operation, preventing its completion.

I advised him to write to his father, who lived some distance in the country, to obtain his views, and, if in favor of the course proposed, to be present at the operation. I also referred him to my friends, Drs. Van Buren and Metcalfe, who kindly examined the case, and did not hesitate to recommend the same operation.

Accordingly, on the 6th January, 1857, assisted by Drs. Van Buren, Metcalfe and Thomas, and in the presence of the patient's father, also Drs. Quimby, Stiger, etc., and being placed under the influence of ether by Dr. Thomas, an incision was made through the skin and cellular tissue, extending from just below the external abdominal ring to near the lower extremity of the scrotum. By careful dissection, the veins were separated from the vas deferens and spermatic artery, and a strong double ligature was passed about the entire bunch, and tightened as high in the upper portion of the wound as possible. The veins were now cut through, with a pair of scissors, just below the ligature, and the mass carefully dissected down beside the spermatic artery and vas deferens to the testicle, around which they were closely cut off in the same manner with the scissors, ligatures being applied to each bleeding orifice. Four ligatures were thus placed on the lower openings, and two or three small arterial vessels continuing to ooze in different parts of the wound, they were also tied.

The testicle was carefully examined, and, with the exception of the atrophy and softening from long-continued pressure, was pronounced healthy, and returned to its bed. The vas deferens and spermatic artery were carefully respected, and, though cleanly dissected out, were uninjured. The wound was closed in the usual way, with stitches and strips of adhesive plaster; the double ligature emerging through the upper corner of the wound, the remaining ones through the lower corner. Cold water dressings were applied, and the patient left till the following day.

January 7th.—Pulse 100; inability to pass water, but patient tolerably bright. Catheter used three times in twenty-four hours.

January 8th.—Pulse 130; countenance anxious; considerable pain and tenderness along the spermatic cord and around the inguinal region. The scrotum was much swollen, and the same inability existed to urinate. Marked phlebitis and circumscribed peritonitis were present. The catheter was used as before, cold water dressings continued, and opium given, particularly at night.

January 9th.—Symptoms slightly aggravated; pulse 135.

January 10th.—Patient about the same; pulse 130.

January 11th.—Slight amelioration in the symptoms.

January 12th.—Pain and swelling subsiding.

January 15th.—Much improvement; the patient, for the first time, passes water alone; relishes his food.

January 22d.—The lower ligatures have all come away.

January 25th.—An abscess has formed in the scrotum, for which an incision about an inch in length was made, external to the incision made during the operation, which has entirely healed, with the exception of a small spot, allowing the exit of the double ligature.

February 9th.—Now thirty-four days after the operation; the double ligature has come away, firm traction having been made daily for eight days past, and continued traction by means of the adhesive plaster roller during the previous forty-eight hours. The scrotum has resumed its natural size, form, and appearance.

February 10th.—The patient was allowed to rise, but, on assuming the erect position, the scrotum, in a few seconds, became suffused with blood, then purple and actually black. The patient complained of a fulness and unpleasant sensation, which entirely subsided, together with the black color, in resuming the horizontal position. The veins of the scrotum had taken upon themselves the task of returning the blood to the body, and, in the course of a few weeks, the circulation having become equalized, this condition of things entirely subsided.

July, 1859.—I have seen Mr. C., who tells me that since the operation he has not suffered in any way from the scrotum or veins; that no enlargement has recurred, the emissions have long since disappeared, as well as the pains and low spirits, and that he is now an active man, enjoying perfect health.

SUPERNUMERARY THUMB ON ADULT.

P. M. presented himself to me in December, 1851, with a well-developed supernumerary thumb on the right hand. On examination, it was found to have a carpal, meta-carpal bones and phalanges, with a good extensor and flexor muscles, capable of considerable and independent motion; but, being a laboring man, and this interfering a good deal in handling a shovel, I advised its removal, to which he freely consented; and, assisted by Mr. Gadolfe, cut down on each side to the carpal bone, and, to avoid entering entirely into the wrist-joint, divided this with Liston's forceps, leaving a portion of it behind; the skin was brought over the remaining portion of the carpal bone, and all united by first intention in a few days. The motion of the other thumb of the same hand remained good, and the patient was fully satisfied with its riddance. I saw him some time after, in the enjoyment of good health.

HOSPITAL RECORDS.

ST. VINCENT'S HOSPITAL, NEW YORK.

Reported by ABRAHAM G. WENDELL, M. D., House Surgeon.

POST-FASCIAL ABSCESS ORIGINATING IN THE ILIAC FOSSA.

H. T., aged 28,—married,—born in Ireland,—letter-carrier. Admitted into the hospital August 21st, 1877. Family history is good. No history of syphilis. Previous to this disease he had always been a robust man, of temperate habits and of great energy.

Four weeks before entering this hospital, while delivering letters, during a very stormy evening, he slipped and hurt his foot, which caused him considerable pain for a while, but he was able to proceed, and finish his duties for the evening.

On arriving home his foot was tender, and, as he thinks, somewhat swollen; he applied cold water, and in the morning was able to reassume his duties, although with some discomfort in the foot. The next evening, after getting home, he renewed the cold applications, and the second morning found him as well as ever, and his foot free from any trouble. Five days after this accident he felt some pain in the left groin, was feverish, and had a slight chill; he remained at home, and sent for a physician who, on examination, found the lymphatics of the left inguinal region enlarged and painful, some fever, etc. He ordered potassii iodidi, and the parts to be painted with the tincture of iodine. Since then his symptoms have grown worse; he has had excruciating pain in the left iliac region, his fever continued, he lost appetite and flesh, he could not sleep, and felt very much depressed. Since he called the first physician he has had six others to see him, whose opinions were divided, some attributing the whole trouble to a bubo following some venereal disease, which they thought he denied; some thinking it was a case of morbus coxarius. At the time of admittance his general condition was as follows: He was emaciated and weak, his pulse was rapid and feeble, and his countenance expressive of the most intense suffering, his tongue furred and bowels costive. Temperature $100\frac{2}{4}$ °.

He complained of severe pain in his left groin, and was unable to straighten out the thigh, which looked considerably emaciated in comparison with the sound one, and measured $17\frac{1}{2}$ inches, while the other was 19 inches in circumference; he lay most of the time on his back; his sleep was very poor, as, during the night, his pains increased; he had no appetite whatsoever, and felt very thirsty. On careful examination of his groin, a deep swelling, tender and very painful to pressure, was felt; this swelling was situated behind the outer half of Poupart's ligament, and, extending upward, occupied the iliac fossa; the crest of the ilium, on both sides,

afforded a wide difference: while on the right side it could be easily grasped, and the fingers could be buried in the fossa, on the left it was impossible to do so, nor could they embrace the crest of the ilium, nor the anterior superior spinous process. The swelling was not discernible below Poupart's ligament. The skin covering the swelling, as well as the subjacent tissues, were supple and unadherent, and there was neither heat nor redness. Fluctuation was not perceptible at any point. The thigh was kept flexed at an angle of about 140° with the trunk; extension was impossible, as it caused a great deal of pain, and, when tried, it seemed as if the whole pelvis moved with it. On certain movements of the body he complains of pricking sensations in the leg. The abdomen was tympanitic, and its muscles kept in a state of rigidity. There was no tenderness or pressure along the spine. Rotation of the thigh was perfect; there was also no pain on pressing the head of the bone against the acetabulum.

My diagnosis was iliac abscess, and was confirmed by Dr. Little, when he saw the patient during his daily visit. I ordered warm flaxseed poultices to be kept constantly applied over the parts; milk-punch, concentrated beef-tea, and ten drops of Magendie's solution, hypodermically.

August 22d.—Patient has passed a good night under the influence of the opiate; complains of less pain, has been able to take during the day his milk-punch and beef-tea, and as his bowels had not moved for four days, oleum ricini, one ounce, was ordered, aided, if there was any necessity, by an enema; Magendie's solution of morphia, ten drops, was given hypodermically.

August 26th.—Since last note there has been no change in the condition of the swelling; the patient, under the influence of ten drops of sol. of Magendie's in the morning and evening, is kept without pain and quite comfortable. To-day Dr. Little made an exploratory puncture of the abscess with the fine needle of Dieulafoy's aspirator, and drew off about one ounce of thick, creamy pus, without any fetor; as the object was to confirm still further, by this procedure, the diagnosis already made, the needle was withdrawn, and the poultices ordered to be continued. During the night the patient felt uneasy, was very restless, and his pulse was 108° , his temperature 102° .

August 27th.—The pulse to-day is 110, and temperature 102° ; he had chilly sensations this morning. His tongue is furred, and somewhat dried at the middle. The bowels being constipated, a movement was obtained by oleum ricini, one ounce, aided by an enema.

August 28th.—Patient feels better this morning, has been able to sleep, and does not complain of pain. Pulse 105, temperature $100\frac{1}{2}^{\circ}$.

September 6th.—Since last note the temperature and pulse have been about the same. Pain has been relieved by the hypodermic administration of Magendie's solution, ten drops, morning and evening. His respiration has become quite thoracic, and he breathes rapidly. The hot flaxseed poultices have been kept constantly applied since he entered the hospital. On examining the iliac region, we find the swelling more prominent and more easily defined, although, by percussion, its area is found not to have

increased any. The skin still preserves its natural color and its suppleness, and there is no discoloration to be noticed. The patient was etherized, and an incision of about two inches was made, at about three quarters of an inch below the middle of the outer half of Poupart's ligament. This incision extended through the skin, subcutaneous tissue, and fascia lata. The first stroke of the scalpel over this last tissue was followed by an escape of pus, whereupon the track was enlarged, and a free outlet afforded for the contents of the abscess, which was thick pus, without any odor and about fourteen ounces. Having divided a small vessel, this was tied, and the hemorrhage, which was very slight, stopped. A tent smeared with carbolic acid oil was introduced into the wound, which was covered over with a compress, saturated with carbolic acid solution, and a bandage.

The patient rallied from the effects of the operation, feeling very much relieved, but as he had still some pain, Magendie's solution, ten drops, was given hypodermically.

September 7th.—He has slept perfectly well last night; the relief has been more decided, as there has been a continued free discharge of pus, and the limb can be moved with more ease.

Temperature 102°, pulse 120. One of Nelaton's soft rubber catheters was introduced well into the cavity of the abscess, and this thoroughly washed out with a tepid solution of acidum carbolicum, by means of a Van Buren's bag syringe, introducing the nozzle of this into the free end of the catheter. A new tent was introduced, and compresses, saturated in a solution of acidum carbolicum, were ordered to be applied constantly over the wound.

September 8th.—To-day the cavity was washed out in the same manner as yesterday; the discharge has been exceedingly small, and the introduction of the tent was discontinued.

He can move the thigh with greater freedom. He does not wish to take any more anodynes, as he says he can stand the little discomfort he feels at present without them. Pulse 100, temperature 101 $\frac{1}{4}$ °. As the bowels have not moved, and he feels some discomfort from this, oleum ricini, one ounce, was ordered.

September 9th.—Pulse 98, temperature 99 $\frac{1}{4}$ °. Appetite improving; pain at the wound; he can extend the leg almost to its normal position. The wound looks healthy, and the discharge has been insignificant. The dressing to-day was the same as the previous ones.

September 10th.—There is absolutely no discharge from the wound, which looks healthy and granulating at the sides. The ligature of the vessels tied during the operation came off while being dressed. To-day we did not wash the cavity, but applied the same dressing. Pulse 87, temperature 99.

September 15th.—There has been no discharge from the abscess since last note. The patient has, as he says, "a voracious appetite." His digestion is good. The motions of his leg are perfect and natural, although he says it feels a little stiff. The healing process in the wound has advanced rapidly, and to-day the edges were approximated by means

of adhesive plaster, and a spica bandage put over all. As there were some signs of cinchonism, the quiniæ sulphas was ordered to be stopped, and tinctura ferri chloridi, twenty drops, to be given thrice daily.

September 19th.—The straps were removed to-day, and the wound found to have healed nearly to its whole extent; and as at the inner corner of it there were some exuberant granulations, this was touched lightly with the solid stick of argenti nitrás, after which the whole was strapped again. The patient having asked permission to get up from bed, this was granted.

October 1st.—A steady, progressive improvement in the patient's general health has taken place since last note. Five days ago we removed the straps applied on the 19th ult., and found the whole extent of the wound had closed. The emaciation of the thigh is much less, and has regained its plumpness to a great extent. The swelling in the iliac fossa has disappeared to a considerable degree, yet some degree of fulness still remains. His appetite is excellent, and his spirits better. To-day he was discharged, at his own request.

PERISCOPE.

COLLABORATORS.

Dermatology.—HENRY G. PIFFARD, M. D., Professor of Dermatology in the University of New York.

Diseases of the Nervous System.—EDWARD C. SEGUIN, M. D., Professor of Diseases of the Nervous System in the College of Physicians and Surgeons, New York.

Diseases of Women and Children.—FRANK P. FOSTER, M.D., Gynecologist to the New York Hospital Out-door Department.

General Surgery.—EDWARD J. BIRMINGHAM, M.D., Surgeon to Bellevue Hospital Out-door Department.

Genito-Urinary Diseases and Syphilis.—ROBERT W. TAYLOR, M.D., Professor of Dermatology in the University of Vermont.

Ophthalmology and Otology.—S. B. ST. JOHN, M. D., Assistant Surgeon to the New York Eye and Ear Infirmary.

Orthopedic Surgery.—NEWTON M. SHAFFER, M.D., Surgeon to the New York Orthopedic Dispensary and Hospital.

Practical Medicine.—E. DARWIN HUDSON, JR., M.D., Professor of Practice of Medicine, Woman's Medical College, New York.

ON A CASE OF PSORIASIS TREATED BY CHRYSPHANIC ACID.

BY

J. C. OGILVIE WILL, M. D. (*The Medical Press and Circular*, Aug. 8th, 1877.)

WILL reports a case of general psoriasis in a boy aged 14: "On April 28th chrysophanic ointment, fifteen grains to an ounce of hot lard, was prescribed, directions being given that it should be well rubbed into the affected parts night and morning. Three days afterward the scales were peeling off freely, and the itch has ceased. On May 3d the scaly patches had completely disappeared from the greater portion of the surfaces involved, and the infiltrated cutis was fast resuming its normal consistence. On May 7 the whole body was perfectly free from scales, and was dyed

of a dusky, purple color, while the spots where the disease had existed presented a smooth, white appearance, forming a marked contrast to the surrounding discolored skin. On May 10th the epidermis covering the unaffected portions of the body was found to be exfoliating, the whole surface being covered by fine furfuraceous scales; but, after the use of warm baths, the skin speedily became perfectly normal in appearance, no trace of disease remaining."

PSORIASIS TREATED WITH PHOSPHORUS "PERLES" AND CHRYSOPHANIC ACID.

BY
BALMANNO SQUIRE. (*The British Medical Journal*, Nov. 3, 1877).

SQUIRE again calls attention to the efficacy of chrysophanic acid as a local application in psoriasis, and adds that the internal use of phosphorus (following Broadbent's suggestion) will also materially modify for the better the aspect of the eruption. He is in the habit of prescribing the French "perles" (capsules), in doses of one-thirtieth of a grain, three times a day. He states further that, after a little use of the drug, more or less tolerance seems to be established, and that the dose may, in some cases, be increased fourfold, and that one-eighth of a grain may be quite safely given, three times a day. [Noting the above, we can hardly pass it without comment, as we have had considerable experience in the employment of the drug referred to. Chrysophanic acid is, of all external applications in psoriasis, the most efficient with which we are acquainted, as it will remove the patches much more rapidly than any of the tars, carbolic acid, creosote, acetic acid, mercurial ointments, iodine, *sapo viridis*, etc. The pure acid is practically unobtainable at the present time in this country, but the impure *Goa* powder (from which it is derived) may be had at most first-class pharmacies. Vaseline appears to be the best excipient for its employment. The strength should be about one part of *Goa* powder to twenty of ointment, and the mixture is best effected by dissolving the *Goa* in hot vaseline, from which most of it is again precipitated on cooling in a state of minute subdivision and equal diffusion. It should be applied once or twice a day, according to the degree of reaction produced. In delicate skins it excites a moderate but quite bearable degree of pain. The acid is neither caustic nor poisonous, and in doses of ten to fifteen grains proves an efficient cathartic, and less objectionable, in some respects, than many of the purgatives in more common use. Chrysophanic acid is useful for many purposes, internal and external, and appears, under ordinary circumstances, to be harmless. As much, however, cannot be said of phosphorus, which Squire recommends so confidently. We have employed it, to a greater or less extent, since Eames, in 1872 (*Dub. Jour. Med.*, etc.), extolled its virtues in certain cutaneous diseases. Our early results were not altogether satisfactory, as on some occasions it appeared to exert a remarkable curative influence, in other cases it seemed inert in the largest doses that we dared give, and

in still others it promptly manifested its poisonous effects. In other words, we found it uncertain and unreliable. The preparations employed were simple solutions of phosphorus in almond oil, "Thompson's solution," and various sugar-coated pills. During the present year we have again employed phosphorus in about twenty cases, in hospital and private practice. The preparations used were the Tinct. of phos. (homœopathic, Phosph. gr j. alcoh. absol. gutt. M.) and Squibb's solution (Phos. gr j., Ol morrhœa gr. xcix). The former may be conveniently administered, if in small doses, for children, by dropping on peppermint lozenges; if in larger doses, for adults, in distilled or boiled water. Squibb's solution may be given on sugar, or, better, in capsules, with enough cod liver oil added to fill them, the object being to prevent, as far as possible, the access of air, and consequent premature oxidation of the phosphorus. Using these preparations in tri-daily doses, containing from one-hundredth to one-twentieth of a grain of phosphorus, we found that almost invariably a very considerable degree of pruritus and cutaneous irritation occurred, followed, in about one-half the cases, by decided improvement in the eruption. In the others the amelioration was not greater than might have been expected from arsenic given in the usual manner for the same length of time. In males, careful inquiry was made as to aphrodisiac effects. In those taking doses not exceeding one-twenty-fifth of a grain no effect was apparent. In one case (age 50, dose one-twentieth of a grain, tri-daily) morning erections became more frequent. Neither gastric nor hepatic disturbance occurred in any of the cases, but three females in Charity Hospital (doses one-fiftieth to one-thirty-third) complained of pain in the left side. Upon examination we found in two of them distinct pleuritic friction, without present or subsequent serous effusion. In the third case, not personally seen at the time, the same condition was noted by Dr. Cladek, the assistant physician at the hospital. In June last we prescribed twenty doses of phosphorus for a patient with psoriasis, who did not again call until the following October. He stated that as the medicine had affected the eruption favorably, he had had the prescription several times renewed. His skin was now in good condition, but he was troubled with frequent and profuse urination. On examination his urine was found to saccharine. Phosphorus certainly exerts a decided influence on psoriasis, as on several other cutaneous affections, when given with proper safeguards. These are: a reliable preparation and a moderate dose. Squire's dose of three-eighths of a grain daily, we believe to be unsafe, and if ill effects have not followed it, it is probable that the activity of a portion of the phosphorus has been impaired by oxidation.

COPAIBA AS A DIURETIC.

BY

DR. HORACE S. HOWELL (*Lancet*, Oct. 13th, 1877).

IN the treatment of the late Mlle. Tietjens, Drs. Spencer Wells and Howell, after vigorous efforts to produce diuresis by various remedies, without success, found excellent results from the resin of copaiba, in 10-grain doses.

E. D. H., JR.

ABOUT BOOKS.

A Manual of Physical Diagnosis. By Francis Delafield, M. D., and Charles F. Stillman, M. D. New York: Printed for the Authors.

ON the first page of this work is an admirably and beautifully prepared colored plate, exhibiting the topography of the thoracic and upper abdominal organs. Rather than a plate, however, we should have said *series* of plates, one folding over the other, for such in reality it is. On the exterior is a representation of the ribs and sternum, and in the interspaces, where the costal muscles have been cut away, we can distinctly see the lungs situated beneath, of proper form, and in the normal position. We now remove the chest wall, by lifting off the first cover, which is pasted on a hinge above the drawing, and this discloses a perfect view of the exact size, shape and relative position of the pulmonary organs, and the vessels at the root of the neck. Now we throw aside a lung on each side, and expose to view the posterior walls of the thorax, and, in its accustomed situation, the pericardium. Throwing aside, once more, another fold, we have an accurate sketch of the heart, with the pericardium around it, showing the exact location and relative position of all its cavities, and of all the large vessels at its base. Now, replacing the various folds, and turning over the entire page, we have a skilfully executed drawing of the position of the viscera, as seen from the back.

From this inadequate description, the reader may form an idea of the novelty and utility of the design. It brings before the eye, in a manner beyond the power of ordinary plates and descriptions, the exact position, size and relations of the important organs it delineates. It impresses these facts more vividly upon the mind than anything else could, except their study on the cadaver itself.

In the reading matter, we find the most thorough, condensed, clear, and concise exposition of the facts of physical diagnosis that can be found in any work now published. It would seem at first sight, on reading the text, that completeness had been sacrificed for the sake of brevity and condensation, but this is not the case, as every necessary detail is given, even as regards practical hints in making use of the various methods of examination. Indeed, there is not a superfluous word; but, at the same time, there is great simplicity and completeness. Taking everything into consideration, there is no work with which we are acquainted that combines so many excellencies in so small a compass. It is the ideal work both for the student and practitioner, and we cannot commend it too highly to our readers. We predict for it an extensive circulation wherever its merits become known, and we may well congratulate the authors on the success of their achievement.

THE HOSPITAL GAZETTE AND ARCHIVES OF CLINICAL SURGERY,

A Semi-Monthly Journal of Medicine and Surgery,

EDITED BY

Edward J. Birmingham, M. D., and Frederick A. Lyons, M. D.

VOL. 2, NO. 10.

NEW YORK, DECEMBER 1ST, 1877

WHOLE NO. 19.

CONTENTS.

LECTURES.

Lectures on Paralysis and Convulsions as Effects of Organic Disease of the Brain: By C. E. Brown-Sequard, M. D., etc. Lecture II.	297
Lecture on Injuries of the Arm and Forearm: By Jarvis S. Wight, M. D.	306

ORIGINAL ARTICLES.

Interesting and Instructive Cases in Surgery: From the Case Book of the late J. S. Thebaud, M. D. (1.) Case of Estris Hominis. (2.) Imperforate Hymen. (3.) Indurated Chancres Occurring Twice in the Same Person. (4.) Cancer Cutis of the Neck.	312
---	-----

PERISCOPE.

BROADBENT on Cerebral Localizations. (Dr. SEGUIN.)	315	SORINA on the Indications for Drainage of the Knee Joint	317
RICHARDSON on Lead Poisoning. (Dr. HUDSON.)	316	CHIRINE on Removal of Wedge-Shaped Piece from Internal Condyle of Femur for Knock-Knee. (Dr. SHAFER.)	318
MACDONALD on Mitral Stenosis and Pregnancy. (Dr. HUDSON.)	317	OTTINGER on the Influence of Sulphate of Atropia in Phthisis. (Dr. HUDSON.)	319

ABOUT BOOKS.

Transactions of the International Medical Congress for 1876	320
---	-----

LECTURES.

LECTURES ON PARALYSIS AND CONVULSIONS, AS EFFECTS OF ORGANIC DISEASE OF THE BRAIN.

Delivered at Bellevue Hospital Medical College,

BY

C. E. BROWN-SEQUARD, M. D., Etc.,

LECTURE II.

GENTLEMEN:—In the last lecture, as you will remember, I went into general facts, and spoke of a good many things that are out of the course I intended to follow. Although I have taken up some time in bringing them forward, I must return to them to-day, as there are facts and views that I shall have to mention, which, for their comprehension, require a knowledge of the information I have now to impart. The theories that are now generally admitted as regards the production of paralysis and convulsions, I consider absolutely wrong from beginning to end. Now, as I have taken away the old opinions, I shall, on the other hand, have to present views in order to replace them, and this will require that I

must ask a great deal of attention on your part, as they imply a full comprehension of a good many facts which are very difficult of explanation, and a good many theories, some of which are already explained, while others will need much demonstration. I shall endeavor to do my best to make these things clear in a measure, if not completely.

The first point, then, is this: that the old theories as regards the action of the will, in the production of movements, are extremely obscure, and I cannot understand how it is that they have been admitted for an instant by many others as well as by myself. Since the year 1861, when I first began to advance my new views in lectures, I have met many able practitioners and accomplished teachers, who have told me that they have every moment met with facts that were difficult, or even impossible, of explanation by the old views. They, however, did not attempt to understand them completely, or to advance new explanations, but let them pass, thinking that, perhaps, sooner or later, some facts might be discovered that would explain them. Now, as soon as there is a single fact which is in direct opposition to a theory, that theory should be at once put aside, or, at least, considered very doubtful. I think we all of us err greatly in continuing to accept for a long time what should be set aside at once, when it is proved to be inconsistent with facts. Democrats as we are, liberal in some matters as we are, we are often unwilling to move in the right direction, but too apt to be conservative in matters where we ought to change.

There are facts that overthrow even the very elements of the old theories, and show them, *a priori*, to be wrong. We know that slight pressure exerted on the brain cannot be a sufficient cause for paralysis. In a great many cases, immense pressure does not produce the least paralysis, while in others, a great many phenomena may be caused by an apparently slight pressure. How can these things be reconciled?

Within a few years facts have been brought forward to show that there are distinct centres in the brain presiding over certain muscular movements. The experiments performed to prove these ideas consist in galvanizing certain parts of the brain, when movements are excited. Now is it a proof that these movements depend upon putting into activity the will-power presiding over them? Certainly not. By tickling the foot certain movements may be produced in the face, but who believes that the centre of will for these movements lies in the sole of the foot. The reasoning in one case is equally as good as that in the other, and so we might bring many more analogous instances. Take a case of intestinal worms. There is irritation, and many forms of convulsions and nervous phenomena take place; but are we to conclude from this that the centre of will for these movements lies in the mucous membrane of the bowels? It would be just as rational to draw this inference as it is for Ferrier, Fritsch and Hitzig, and others, to draw the conclusions which they have done from their experiments, as regards these facts. Now let us analyze for a moment the views of Charcot. He published some cases in which, by the destruction of one or two convolutions of the brain, paralysis or convulsions was produced in certain definite parts. These views would be subject to the same criticism as I made a moment ago.

Now there are many other facts which are serious obstacles in the way of the conclusions. Looking at the brain on its lateral aspect, we have the fissure of Rolando coming downward from the median line above toward the front. In front of it lies the ascending frontal convolution. This, according to the theory of those who attempt to localize the centres of will, is the centre of movement for the arm of the opposite side of the body. The convolution behind this, the ascending parietal, is, in a measure, a part of that same centre. In the neighborhood of the median line, and a little posterior, is a centre said to be that of movement of the leg. Now Charcot himself published, in a French journal, with a number of admirable woodcuts, a case in which destruction of the whole of this latter portion produced paralysis of the arm instead of the leg, and consequently this would show that the centre of movement for the arm was located farther backward than in other cases. In another place we find the report of a case in which there was disease of this region, with destruction only of that portion in which was situated the centre for the arm, but there was paralysis of both arm and leg of the opposite side. Everything behind the fissure of Rolando was destroyed, and, in such a case, we ought to have paralysis of the leg, but not of the arm; but there was complete hemiplegia. Now, if you look upon a great many cases of destruction of the convolutions, you will find that a great deal of tissue may be destroyed without paralysis or convulsions occurring. Now, on the other hand, destruction of a very limited portion of brain tissue will often produce paralysis of the arm or leg, but the location of destruction is not fixed. In reality all the facts are clear that these conclusions are absolutely wrong.

But it is not only there that the theory, that one-half the brain serves to supply the other of the body, fails. If you follow the fibres from the surface, you find many crossing from one side of the brain to the other, from the right to the left side, and *vice versa*. By irritating the brain we sometimes get convulsions on the same side, and sometimes on the opposite, conveyed by irritation. This ground is well established by Charcot himself. If a degeneration of nerve fibres takes place on one side, it is propagated downward, across the medulla oblongata to the other side of the cord, out to the nerves, and even to the muscles. This seems the most plausible explanation. If there is disease of the convolutions, it is propagated from the brain to the nerves, and it seems clear that we have to deal with degeneration following down the course of the nerve fibres. This is probably what takes place in all cases of motor trouble. If you study the circumstances in which such cases appear, and the details of all the facts concerning them, you will find many reasons to sustain the conclusions I have drawn from them.

Professors Charcot and Vulpian, of Paris, and Westphal, of Berlin, all have found cases in which disease of the convolutions was followed by a degeneration of fibres. There is an influence exerted on the nutrition of the fibres at the base of the brain, and on the nerves of the opposite side, without direct propagation of the original morbid process. There are fibres going in a continuous channel from the convolutions to the nerves. We must, therefore, admit that a lesion in the surface of the brain can

produce a change of nutrition at a distance. We see this plainly exemplified in the production of tetanus. An injury to a nerve in the sole of the foot, or any other portion of the body, produces a change in nutrition of the spinal cord, without a direct transmission of the lesion along the nerve.

We may find more reasons still against the old views. Where there is disease of the right side of the brain, secondary changes may occur in the whole of the anterior pyramids. At first sight this may seem in harmony with the old view, but the fibres of the anterior pyramids pass through in such a way to the spinal columns, that most of the fibres are in the lateral columns instead of the anterior columns, as they ought to be. Now, where does the secondary degeneration occur? Only in a small part of the lateral columns, and that in the posterior portion; there, only, the secondary degeneration exists. Now, we all of us know very well that this posterior part of the lateral column does not contain any voluntary motor fibres. Here, then, we are evidently out of the track. If the theories were right, those parts that should be affected would be the anterior portions. There is, therefore, in this study of the secondary changes, a great point in discord with the old theories.

Now, there are still further decisive reasons relative to the action of the surface of the brain. If we apply any other than galvanic stimulus or irritation to the cerebral surface, we will never find the least trace of movements. I instituted a series of experiments, and tried by all the other known methods, such as the various mechanical, chemical and cutting irritants, but failed to produce the least trace of movements such as those described. Burning the surface of the convolutions produces facts of the most interesting nature. If we cauterize with a red or white hot iron the surface of the brain on one side, we find occurring a most important fact relative to the symptoms shown in brain disease. In one instance especially such observations were noted. The animal was a dog, whose brain had been laid bare, and the surface of the middle lobe cauterized. When the animal came from under the influence of the anaesthetic, whose effects had lasted but a few moments, he exhibited some very curious phenomena. My friend, Professor Hyen, who has made special and exhaustive studies on meningo-spinal inflammations, and who was present during the experiment, was of the opinion, after considering the symptoms, that there was inflammation of both the spinal cord and its meninges. I have seen other dogs, under the same conditions, show the same phenomena. An autopsy showed that there was no inflammation, and I knew that it was not likely that such a condition existed; but even if it were so, it would prove that irritation of the brain could produce a change of nutrition at a distance. But another thing took place, although the dog had all the symptoms that are ordinarily evidences of inflammation of the cord and its meninges. He had extreme stiffness of the posterior extremities, turned over on his side, with contraction of the muscles, and extreme sensibility of the skin. At times he had jerks and convulsive movements. Now, in this case, what takes place is what we see in many cases of brain disease. The jerkings and

convulsive movements occur without inflammation. There is some peculiar condition of the cells produced. Here is a convulsive disorder brought on with great rapidity in a healthy animal. It cannot be an inflammation, as the rapidity is too great, and it could not, in any degree, be due to the anaesthesia, as the power of feeling, and the consciousness of the animal, were completely restored in a very short space of time. It is a change in the nutrition and vital action of the cells in the spinal cord, and, especially, in the lumbar enlargement. It occurs from the irritation in the surface of the brain.

There is an immense power produced by irritation, and this may be readily conceived when you reflect that the surface of the brain is placed in connection with every organ of the body, so that it may have its circulation or nutrition altered. The brain produces symptoms through an irritation caused by disease or injury to any part of its tissue, starting at the particular part involved, and going to a distance, either in the brain or spinal cord, and producing variety in the effects, according to the nature of the cells attacked by the irritation. Aphasia, anaesthesia and any other loss of the various functions of the brain, are produced in the same way. All of those cases in which a function is lost in the brain itself, or any other organ of the body, depend on an irritation starting from one place, and acting on the other part, and not on the destruction of a centre.

Suppose you have a case of disease encroaching on one of the origins of the optic nerves. You know that they are special nerves in this, that they have a union of fibres in the middle of their course, forming what is known as the optic chiasm. According to the theory of Dr. Wollaston, of London, the optic band is composed of two parts, one going to one eye and one to the other. The corresponding halves of each eye are supplied by fibres from the same side. If the left optic band should be diseased, there would be hemiopia or loss of sight on one side of each eye, on the external side of one eye, and the internal side of the other. This is what the theory would predict, and does occur in some cases. But, continuing to review what ought to take place, we find that if the disease exists only in a small part of the left side of the band, we ought to find that then only one half of one eye will be affected. There are such cases. If it is the other part that is affected, then it is only one half in the other eye which should be affected. There are, also, facts of that kind; so that there are three kinds of facts which seem to support the theory. But, on the other hand, there are clear cases against it. There are a great many facts which show that a disease in one half of the brain will produce complete loss of sight of the two halves of one eye, either on the same side or on the opposite side, or the two halves of both eyes. Therefore, there are three series of facts, and one only would be enough, which demonstrate that the theory ought to be rejected. One half of the brain is quite sufficient for use in the production of sight.

I know that in certain of these cases, as my former assistant, Dr. Hughlings Jackson, has chiefly contributed to establish, there can be an alteration of nutrition produced by contiguity, and the amaurosis is secondary. There may be a neuritis of the retina, and the loss of sight

come on as a secondary result; but loss of sight sometimes occurs without neuritis being present. The most conclusive evidence, however, is that in seven cases of disease of the optic chiasm, with entire destruction of the brain tissue in the neighborhood, there was no amaurosis at all. These facts certainly give the death blow to the theory that one side of the brain serves one-half of the body, and the other the remaining side. One-half of the brain is amply sufficient for both sides. How is it that there is amaurosis without an optic neuritis? The answer is simple, and applies to every other nervous structure besides the optic band. Disease of the optic band, as well as of the tissue of the brain, or any other nervous tissue, can produce just what galvanism of the par vagum produces on the heart. You all know very well that by galvanizing this nerve you can produce complete arrest of the activity of the heart. This is a passive action, if we may use the term, and if you cease with the galvanization, the action of the organ may be restored. A phenomenon of this kind explains everything that produces a loss of function in every part beyond the origin of the nerve implicated. Those parts that do not contain the nerve cells produce the loss of function, not because the tissue is destroyed, but because an irritation is started.

But you will say, how is it that there is such a variety of effects produced in the eye? The answer is evident, if you follow the phenomena produced by the irritation of certain nerves. For example, if you follow the irritation produced by worms in the intestines, you may get hemiopia and other affections of the eye; paralysis of one limb, or of two limbs, of the face, or tongue, or, in fact, of any part of the body. If there is such a vast variety of effects produced when the nerve fibres irritated are at a distance, why is the brain not able to act within itself as well as elsewhere? If we tie the hilus of the supra-renal capsule of an animal, and thus irritate the vessels and nerves, we will stop the heart's action, and the animal will soon die, always within nine days; while, if we take away a much more important organ, as the kidney, it may live very much longer.

All cases in which there is loss of function, as deafness, loss of vision, loss of action of the muscles, loss of memory, of mental activity, of speech, etc., must be explained by admitting that it is not due to disease in a particular locality, but to an irritation transmitted from one place to another. The parts are endowed with the power of propagating an irritation from place to place. Suppose a disease exists in the cerebellum producing amaurosis. Nobody has dreamt of locating the sense of sight in that organ. There are such cases, where the sight is lost in one or both eyes, on the same or on the opposite side to the disease. An action at a distance undoubtedly takes place. Experiments performed on animals confirm these results. In some cases sight is lost by division of the restiform bodies. In most cases the results are produced by irritation at a distance, exciting a restraining or inhibiting effect. There are some objections to be made here, but I will keep them for another lecture, where they will be more in place.

Now as regards convulsions. Convulsions appear from a mechanism

different from that which produces paralysis. Convulsions do not always come on only when there is a disease on the surface of the brain, over the supposed centres of motion, for we can produce convulsions by irritating parts that do not contain supposed motor centres. Convulsions and paralysis both may appear, no matter in what part, either the irritation or disease. Take, for instance, disease in the optic thalami, which have nothing to do with voluntary movements. This function is commonly supposed to depend upon the corpus striatum, or on certain centres in the neighboring convolutions and fibres springing from them, which pass through the corpus striatum. Now, facts prove that disease of the optic thalamus far more frequently produces convulsions than disease of the other lobes, much oftener than disease in the corpus striatum, or other supposed motor ganglia. In comparing these facts, we have clear evidence that there is no connection between the power of producing voluntary movements and convulsions. Still more is this evident in the case of the pons Varolii or meso-cephalon, as it is called by some. Robert Bently Todd, and, then, after him, Nothnagel, believed that it was the centre for epileptic movements. This portion of the brain has certainly a peculiar power under galvanism. It is the only one that produces clonic movements; all other portions produce tonic contractions. These clonic movements are what occur in convulsions. The tonic movements resemble those of voluntary motion. In a dog, in tonic contraction, you see the fore or hind leg raised or pushed out, and held in that position, while excitation of the pons Varolii produces clonic contractions, in which the limb is shaken and jerked about. To conclude from that fact that in that particular spot is located the centre of epilepsy, I cannot at all understand. The fact is, that convulsions have so little to do with it, that they rarely occur when the pons Varolii is diseased. Of eight or ten places in which tumors may be seated, and produce epileptic convulsions, the disease is least often found in this one. There is a place in front of it, irritation of which has produced convulsions on one side; but disease has produced convulsions on the wrong side, according to the theory. There is no rational ground whatever to conclude, because convulsions have occurred, the existence of a centre relative to epilepsy and convulsions.

Now if we are to draw such conclusions, there is a place on the base of the brain which, when irritated, produces phenomena of even a more singular character. This part, when irritated, produces rotatory or circular movements. The man or animal who has this point irritated or diseased will keep up a continual rotation of the body, either going round in a circle, or rotating on the long axis of the body. This very thing occurred to a most eminent scientific man in London. He was suffering from some trouble with the ear, and had nitrate of silver injected into that organ. A short time afterward he commenced to turn round and round in bed, without cessation. Such movements are frequently produced by a mere prick. Now if we are to conclude that a circus movement, or a quick, rotatory movement, depends on irritation of a certain centre; that where a lesion is made to produce a movement, in that place is the centre,--we would have to locate many of these centres in a great

many places. In man as well as in animals these movements are produced, but not in all cases, so are we to conclude that the centre exists in one man and not in another. We must believe that chorea, epilepsy, catalepsy, etc., depend on the propagation of an irritation to certain cells at a distance, which produce the movements. As I said before, these movements are of two kinds: the loss, or production of an activity. The types I have taken, paralysis and convulsions, occur in a loss of function, or a putting into activity those that were at rest. But there is a common element to the two forms. In both cases an irritation starts from the place of the disease. The difference begins in the distant part, and the character of the result depends upon the kind of cell implicated, whether there is loss of function, or an increase or morbid change of normal action.

I pass now to the other part of my subject, and shall begin to enter upon details elucidating certain facts. Let us first place our attention on the anterior lobes of the brain. One-half of these lobes may frequently be destroyed by disease without the manifestation or appearance of paralysis. Now there are portions more posterior, that have been considered as being connected with the memory, by that most eminent man, Carpenter, among others, who grounds his views on experiments which show that the posterior lobes have no action when galvanized, and on the fact that they are more developed in man than in animals, and are developed in proportion to the intelligence. They are, therefore, looked upon as the seat of intellectual activity. The facts relative to the anterior lobes are different. The posterior lobes are certainly the most indifferent parts of the brain. Large as they are, they seem to be less endowed with function, or at least with those functions we know of. There are functions that we do not know of, or are unconscious of; and as we must suppose that, if a function exists, there must be an organ to perform it, it may be that the posterior lobes are the seat of this power.

But to come back to what I was trying to establish. These lobes may be destroyed without causing any difference in the action of the rest of the brain. If we commence destroying the brain little by little, we shall have to destroy a large portion before the activities described by Fritsch and Hitzig will be abrogated. The old experiments of Flourens, consisting of removal of the hemispheres, show that all the activities can go on. This has led me to admit that the real organization of nerve cells and fibres is not such as to correspond with the necessity of the existence of particular centres. The real organization is this: the cells which are employed in performing certain functions, as, for instance, the power of expressing ideas by language, are not situated in one spot, but are scattered all over the brain, so that a great destruction of tissue can take place without the loss of the function. The whole of the third left frontal convolution, including the insula of Riel, that has been regarded as the seat of the power, enabling us to express ideas in speech, may be destroyed without loss of this function. There is, therefore, the absolute necessity to admit that the function is more generally diffused, and belongs to more parts than this particular locality. This is a hypothesis

which is in perfect harmony with all the facts of which we have any knowledge. It may at some future time be overthrown, but at present it is sufficient to explain all phenomena that occur.

The function of moving the right side of the body belongs to cells that are scattered on both sides of the brain, and one side may be sufficient to call into activity both sides of the body. Such is likewise the case with every other function of the brain. As regards the anterior lobes, we know that they can be carried away without important results, if they only contain a portion of the cells necessary to voluntary movements. In point of fact, both the anterior lobes have been entirely destroyed, and no symptoms of paralysis resulted. We cannot, therefore, place these faculties where they have been located. The same thing holds true with regard to the power of expressing ideas by language, of moving the arm, and certain muscles of the face. If we go back further to the middle lobes, we find that they can be destroyed without loss of power. If we take what relates to various other portions of the brain, as regards the power of producing convulsions, we find the same facts to be true.

I have collected one hundred and eighty-seven cases of epilepsy due to tumors, and I am glad to say they were not my own cases, but those of others well described. In three cases only was the disease due to pressure on the corpora striata. These portions have, as I need not tell you again, been considered centres of motion. Due to pressure on the corpus callosum, two cases; anterior lobes, ten; optic thalami, fifteen; posterior lobes, nine; and various other portions, the remainder, one hundred and forty-eight. This shows an immense variety of places in which the disease can be produced.

In most cases in which the membranes of the brain are diseased, you have convulsions, and there you have another argument against there being disease of the centres. This much as regards the meninges. In cases of hemorrhages, in one hundred and seventy cases, in thirty-seven there were convulsions; while they only appear nineteen times in cases of tumors of both corpora striata, and optic thalami in one hundred and fifty-eight cases.

If we take again an examination of various parts of the brain, we find corroborative evidence. In the base convulsions or paralysis come on very rarely from disease of the parts just above the ventricles, if only the white tissue be diseased. Disease in the crura cerebri produces convulsions rarely, but paralysis frequently. This fact, likewise militates strongly against the old theories. In six or seven cases, where the crura cerebri were diseased, there was no appearance at all of paralysis or convulsions. In one case paralysis occurred on the same side as disease in the crus.

LECTURE ON INJURIES OF THE ARM AND FOREARM.

Delivered at the Long Island College Hospital, Brooklyn, N. Y.

BY

JARVIS S. WIGHT, M. D.,

Professor of Surgery and Clinical Surgery.

GENTLEMEN :—To-day I propose to make some practical remarks on injuries of the arm and forearm. And let me say to you that the upper limb is a marvellous piece of mechanism. You know that it is our duty to study this mechanism, and that it is our province to try to repair it, when it is injured and deranged. And it is a fair inference that the better we understand the parts of this mechanism, the better can we repair its injuries. At the outset let me draw your attention to the fact that the humerus has some important points of practical anatomy :

First. The unbroken humeri of the same persons may be equal in length, or *they may be unequal in length*. How do we know ? In the most certain manner, by comparative measurements of the corresponding bones. And many such measurements enable me to make the following statement, which may be modified by future investigation : The normally developed humeri of the same person often differ in length; they sometimes differ as much as one inch; they frequently differ as much as one-half inch; and the left humerus is more frequently longer than the right. The same law of growth holds good in regard to the humeri, the femora, the clavicles, and other corresponding bones. Hence the comparative measurement of two corresponding bones, if one be broken, does not afford positive evidence that the bone in question is broken. We must look for further evidence.

Second. The greater tuberosity of the humerus is found, in its normal condition, directly under the acromion; and this relation will be a guide to determine an abnormal rotation of the humerus, or a displacement of the upper end of this bone.

Third. The greater tuberosity and the head of the humerus bear a constant relation to its condyles. A straight line bisecting the arc of the head of the humerus points just back of the internal condyle, about where the ulnar nerve runs; and a straight line bisecting the greater tuberosity of the humerus, from above downward, points toward the radio-humeral articulation, just in front of the external condyle; hence, the condyles of the humerus will be guides to determine the position of the upper end of the unbroken humerus, and they will also be guides to determine any rotary displacement of the lower fragment of a broken humerus, and the acromio-humeral relations will indicate any displacement of the upper fragment.

Fourth. The humerus, in its normal condition, rotates through an arc of about 90°, and as there is no ligament in the humero-scapular

joint—like the ligamentum teres—the surface of the head of the bone will glide to and fro on the surface of the socket to a limited extent, while the greater tuberosity moves to and fro, so that the centre of rotation will be somewhere in the head of the humerus, and the axis of rotation is, therefore, a line parallel with the axis of the shaft of the humerus. And when the forearm is flexed to a right angle with the arm, and laid across the chest, *the arm is nearly in a state of mid-rotation.*

Again let me draw your attention to some important points of practical anatomy, as found in the bones of the forearm:

First. The bones of the forearm form a quadrangle. In one position these bones are in the same plane. Flex the forearm to a right angle with the arm, and lay it across the chest; the radius and ulna are in the same plane when the forearm is in a state of mid-rotation; then pronate or supinate the forearm, and the radius and ulna will not be in the same plane. Completely extend the forearm, and lay it on its back; the radius and ulna are in the same plane, when the forearm is in a state of nearly complete supination; then pronate the forearm, and the radius and ulna will not be in the same plane.

Second. When the forearm is completely extended, and in a state of complete supination, the axis of the forearm and the axis of the arm, at their point of meeting, usually form a very obtuse angle, which varies in size for different persons.

Third. When the forearm is flexed to a right angle with the arm, and laid across the chest in a state of mid-rotation, the plane of the radius and ulna forms a pretty constant angle with the axis of the humerus. A great many measurements of this angle give an average of about 145° —its supplement being 35° —so that the forearm normally rotates through an arc of about 180° ; it sometimes rotates through a greater arc, and sometimes it rotates through a less arc. Hence, if the arm rotates through an arc of 90° , and if the forearm rotates through an arc of 180° , the upper limb will rotate through an arc of 270° .

Fourth. The forearm is somewhat like a truncated cone, whose bases are at the elbow and the wrist; the convergence from the elbow to the wrist varies in different persons; it is sometimes considerable, and it is sometimes slight.

My practice for some years has been influenced by the above considerations, and I have from time to time constructed splints for the arm and forearm upon the principles involved in the practical anatomy, as I have just enunciated it, and I have had many encouraging results. Let me now briefly describe these splints, point out their uses, and show their advantages:

A double-angled splint, constructed on the facts above set forth, will meet the requirements for treating, with a good degree of success, many of the injuries of the forearm. The splint is best made of a piece of board and a piece of wire-cloth. The piece of board extends from the ends of the fingers to the end of the olecranon; it is about

three-eighths of an inch thick, and it is wide enough, in each case, to prevent strangulation of the hand and forearm, and obviate pressing the radius and ulna toward each other. The upper and outer angle of the olecranon end of the piece of board, for a distance equal to the diameter of the arm, is beveled, so that the cut surface and the inner surface of the board make an angle of about 145°, and the piece of wire-cloth is securely fastened to the beveled surface, having its axis at a right-angle to the axis of the board. It will be seen that this splint has two angles—one a right angle, the other an angle equal to the angle made by the axis of the arm and the plane of the quadrangle of the forearm. The wire-cloth is galvanized, having a mesh about one-half inch square, and a wire about one-sixteenth of an inch diameter. Both the mesh and the wire may be smaller for children. Cut a piece of wire-cloth with pliers,—the piece may be wide enough to cover one-half the surface of the arm, and it may be long enough to reach to the middle of the arm, or to the acromion,—and when the piece of wire-cloth is fastened to the board, as above described, its posterior edge is bent inward and downward, and fastened to the olecranon end of the board. This bent edge lays hold of the posterior surface of the arm, and also prevents the piece of wire-cloth from bending.

A fact to be noted here is that the head of the radius and the external condyle are nominally in the same line; that is, they project outward about equally. These two landmarks are readily found when the forearm is flexed to a right-angle with the arm.

The double-angled splint, above described, may be used for fractures and other injuries of the forearm, and the advantages of such a splint are theoretically and practically as follows:

1. The double-angled splint cannot slip off the forearm in a distal direction, because the piece of wire-cloth, being fastened to the arm, will prevent such a result.
2. The double-angled splint will put and hold the bones of the forearm in mid-rotation,—in the plane of their quadrangle,—because it has been constructed with the angle that this plane, when demiflexed, makes with the axis of the arm.
3. The double-angled splint will prevent (*a*) extension and flexion of the forearm; and it will prevent (*b*) pronation and supination of the forearm, because the two pieces of the splint are immovably fastened together. It, therefore, keeps the injured forearm securely and perfectly at rest in a most favorable position, and this is a primary and essential indication of surgical practice.
4. The double-angled splint can be first fastened to the arm, and then the distal fragments of the broken bones can be drawn into place and fastened to the distal part of the splint, thus enabling the surgeon to make extension and counter-extension, while the broken bones are in the same plane.
5. The double-angled splint permits the surgeon to remove the bandages from the forearm, leaving the bandages on the arm,—which

an assistant may hold,—while the forearm is gently flexed and rotated, so as to preserve and restore its important functions. Also the condition of the injured parts can be inspected, from time to time, by gently holding the injured forearm against the splint, while the bandages are off, thus obviating serious disturbance of the fragments.

The double-angled splint is generally a dorsal splint, but it may be made a palmar, or anterior splint, if the occasion require it. And when the double-angled splint is dorsal, a suitable anterior splint may be applied to the forearm, according to the judgment of the surgeon; but when the double-angled splint is anterior, a posterior splint may be applied to the forearm; this additional splint is made equal in size to the wooden part of the double-angled splint.

It is an excellent rule, in surgery, to put a joint near a fracture at rest; this indication is very completely accomplished in case of fracture of the forearm, by means of the double-angled splint, which embraces both the wrist-joint and the elbow-joint, thereby limiting to a considerable extent the muscular contraction.

So that the theory involved in the construction of this splint is based on anatomical and physiological facts, and, after a somewhat extended use of it, I can recommend it for treating many injuries of the forearm, and I will now designate some of these injuries:

1. Sprains and contusions of the wrist may be well treated with the double-angled splint, because it is one of the best means of putting at rest and properly compressing the synovial membrane of the joint, and the synovial sheaths of the tendons that may be implicated, and it will very comfortably support and protect the wrist after the surgeon has made judicious passive motion.

2. Sprains, contusions, and reduced dislocations at the elbow, are best treated with this splint, because it is specially adapted to fit the structure, and rest the function of this part of the upper limb. In my hands it has produced the happiest effects and the most gratifying results.

3. Simple fractures of one or both bones of the forearm cannot usually be better treated by any other means, because it holds the bony fragments at rest in the same plane, preventing flexion and extension, pronation and supination, and muscular contraction. But in a fracture of both bones of the forearm, near the elbow, I found that the double-angled splint failed to give a perfect result.

4. In treating one case of compound fracture of the forearm, the opening being on the inside, the double-angled splint was of the greatest possible service; by fastening a trough of wire-cloth to the underside of the board-piece with wire-hinges, and swinging it under, up, and around the inside of the forearm, which was gently placed in this trough on a bed of oakum, where the process of repair went on most kindly. The patient was a laborer, about fifty years of age.

5. A compound comminuted fracture of both bones of the right forearm of a young man was resected at two different times; the opening was on the back of the forearm, midway between the wrist

and the elbow, and the crushing was done by machinery. After the resections the limb was laid on an internal, double-angled splint, well lined with oakum, and a trough of wire-cloth, fastened with wire hinges to the lower edge of the board-piece, also well lined with oakum, was swung backward, upward, and around the forearm and hand, two compresses—one above and one below—keeping the fragments in place. The case did well.

The trough of wire-cloth had special advantages. It is a very perfect retentive appliance; it enables the surgeon to make frequent examinations without disturbing the bony fragments; it affords the greatest facility in removing and reapplying the dressings, and it enables the surgeon to make proper passive motion of the wrist-joint and of the elbow-joint. And, in general, the double-angled splint usually gives relief from pain, a fact which patients often express in grateful words. And the patient who wears this apparatus can lie down, sit up, or walk about, with great comfort and safety; of course the forearm is put in a sling.

A splint for treating fractures of the humerus may be constructed in the following manner: Cut two pieces of wire-cloth wide enough to cover laterally one-half the surface of the arm; let one be long enough to reach from the end of the acromion to the junction of the shoulder with the neck—this is the short piece; and let the other be long enough to reach from the end of the acromion to about two inches beyond the dorsum of the ulna, in a line with the axis of the humerus—this is the long piece. Bend each piece into the shape of a trough, and fasten each piece at the middle of its convex surface to a wooden strip one-half inch thick, and one inch wide; connect one end of the short piece to one end of the long piece, by means of a hinge of leather, brass, or iron; now fasten one end of a piece of wire-cloth to the back of the other end of the long piece; this piece is to be applied to the dorsum of the forearm, the long piece is to be applied to the arm, and the short piece is to be applied to the shoulder. The piece of wire-cloth for the forearm must be even with the lower end of the long piece; it must be bent at the elbow, so that the forearm, when fastened to it, will be at a right-angle to the arm, and so that the arm will hang by the side having the greater tuberosity directly under the acromion; and it must be as wide as the forearm, and extend to the ends of the fingers. The manner of applying this apparatus is as follows:

(a). Let the flexure of the joint of the splint be over the end of the acromion, and the short piece over the shoulder from that point to the neck, and let the long piece drop down over the external lateral surface of the arm; gently, but firmly, bind the upper end of the splint to the shoulder, by a bandage passing around it and under the axilla,—this is the first step,—and the upper end of the splint cannot move in any direction; now take the forearm and the distal fragment of the broken arm from the hands of the assistant, and, because the upper fragment and the shoulder are fastened to the upper end of the splint,

extension can be made by traction downward on the forearm, and counter-extension can be made by pushing upward on the splint, so that the fragments can be easily reduced in the most perfect manner, and with the greatest relief to the patient; and now bind the distal part of the splint upon the dorsum of the forearm; and then, finally, mould the ends of the fragments in place with the ends of the fingers, supporting them by a suitable internal splint; and over both splints, where they cover the broken arm, apply a bandage from above downward; put the forearm of the patient in a sling, and let him walk about.

(b). The advantages to be derived from the use of this apparatus may be briefly enumerated :

1. It enables the surgeon to make extension and counter-extension with ease and safety ; and this work cannot be so well done without the piece for the forearm.

2. It prevents undue motion of the fragments, and obviates their rotary displacement : two events which are apt to follow, when there is no piece applied to the forearm. And I have more than once seen a patient hold or carry his forearm with his other hand, when splints were only applied to the arm, in order to prevent motion of the lower fragment and consequent pain.

3. It permits the patient to go about with comfort and safety, thereby conducing to the general health, so that the fragments will unite more kindly. Let me say to you that I have seen a strong, healthy man put on his back, and kept there for weeks, for a simple fracture of the humerus, near its middle—an unnecessary procedure.

4. Without removing any part of this apparatus, the surgeon can make enough passive motion of the shoulder-joint to retain the integrity of its function.

5. It allows the surgeon to make judicious, early, and continuous passive motion of the elbow-joint, by liberating the forearm from time to time, while an assistant holds that part of the apparatus applied to the arm.

6. There is the minimum of pain during the primary application of this apparatus, and during the course of the general treatment.

(c). The arm-splint, comprising the long and short pieces above described, may be combined with the double-angled splint for the forearm, in some cases of injury of the upper limb. For instance, a fracture near the elbow-joint, with or without dislocation at this joint, may be well treated by means of this combined apparatus. When the humerus, the radius, and the ulna are broken at the same time, it makes a very complete, reducing and retentive appliance ; and, in fact, it may often be used to advantage in an ordinary fracture of the humerus, or of the forearm.

ORIGINAL ARTICLES.

INTERESTING AND INSTRUCTIVE CASES IN SURGERY.

From the Case-Book of the late J. S. THEBAUD, M. D., Surgeon to St. Vincent's Hospital, Colored Home, Etc.

CASE OF ESTRIS HOMINIS.

REMOVED from the cellular tissue (subcutaneous) below the armpit as follows:—A man of about 35 years of age, of good health, apparently, presented himself to me about two months since, during my hour of attendance at the New York dispensary, complaining of a swelling in his left armpit.

He stated that he had been travelling in Central America, and that while there, six months previous to my seeing him, he perceived a small swelling in his left armpit, which gradually enlarged, and became very painful, incommoding him considerably in the motions of his arm. On returning to New York, he travelled from New Orleans up by land, consulting physicians in the different cities on his route, who pronounced it a simple abscess, and advised it to be poulticed, which advice he had strictly followed for the last four months.

On examination, I found two oval tumors on the side of the body, just below the armpit, between the third and fifth ribs, the lower and smaller one about the size of a pullet's egg, movable under the skin, somewhat firm to the touch, with no inflammatory base, and no inflammation of the skin. Of this he did not complain, and seemed uneasy only about the higher and larger one, which was of the size of a large hen's egg, hard, painful at all times, and to the touch increased; somewhat attached to the skin; warmer than the surrounding parts, or brother tumor, and giving evidence of inflammation. The skin over the tumor had a hard, gristly feel, was of a bluish color, slightly oedematous at the margins, and tender to the touch.

I advised an incision to be made into the tumor, to which he readily consented, saying "that he had suffered long enough with it." The knife passed through a hard, gristly tissue into the cavity, at the bottom of which I perceived something moving, and on examining still further, found it to contain a worm or insect of some kind. On grasping it with the forceps, it seized hold of the wall of the cavity with its small extremity, but by slight and gradual traction with the forceps it lost its hold, and was dragged from its nest. It lived for a moment, rolling over two or three times by its vermicular contractions, after which, no further evidences of life being perceptible, it was put into alcohol, by which fluid it has been much changed in color and diminished in size.

The other tumor undoubtedly contained an insect of the same variety, though probably not so far advanced in its intradermic life. I proposed

removing it, to which he strongly objected, and, seizing his hat and coat, rushed from the room lest he should be operated on, *nolens volens*. His sudden departure prevented me from examining the cavity or nest, but it was certainly lined with a thick cyst, and it contained some purulent matter.

The worm, on removal, was of a yellowish white color, and about an inch and a-half in length. It is still in my possession (Oct., 1852), though much diminished in size and changed in color.

It was presented before the Pathological Society, but none of the members had ever seen anything of the kind before.

Drs. Fountain and Le Count, who have both spent some time in California, have lately informed me that they are not rare in that country.

HYMEN IN A FEMALE THIRTY-THREE YEARS OF AGE.

M. DICKEY, native of Ireland, and 33 years of age, states that within her recollection she has never discovered any opening into the vagina, though she menstruates regularly, and the discharge of blood escapes so as to stain her linen.

On examination, the vagina was found closed, with the exception of a small opening at the posterior part of its entrance; through this a small catheter could be passed, which allowed the exit of a quantity of greenish and fetid pus. The mucus membrane, inside the vulva, was inflamed, probably owing to the fact that two weeks previous an attempt at coition had been made, which we need not say was unsuccessful. She states that considerable effort was made on the part of both, and, finally, each retired, suffering considerable pain, and fully disgusted with one another.

An operation was thought advisable, and I accordingly obliterated the stricture and membrane, by making two lateral and one vertical incision downward, which were accompanied by some hemorrhage, and immediately allowed the entrance of the finger, and then the speculum, without much pain. The vagina, at its commencement, was stuffed with lint.

Nov. 29th.—Four days after, the patient pronounced herself much relieved; the discharge ceased, as also the pain, and the speculum was easily introduced. A candle was ordered to be passed, night and morning, for a week or two.

Dec. 15th.—On making an examination, found the vagina free, and the case cured of the natural stricture.

INDURATED CHANCRÉS OCCURRING TWICE IN THE SAME PERSON.

B. C., aged 25, born in Ireland, formerly student at Trinity College, had, in April, 1851, an indurated chancre, attended with bubo, which suppurated, sore throat, roseola, and characteristic rheumatic pains coming on at night.

He was treated, externally and internally, with mercury, which slightly salivated him, when the chancre immediately commenced to heal. It is well to remark that the patient had the chancre over one month before

treatment was commenced, and this was only discovered by the physician who had been consulted for the bubo.

March 20th, 1853.—The patient came to me five weeks after his last connection with a female, complaining of a lump in his groin. On feeling the engorged gland, and hearing the history of his previous attack, knowing that, as yet, no case of indurating chancres occurring twice in the same person had been published, I felt considerable interest in the case, and, upon close examination, discovered two indurated chancres, one on either side of the frenum preputii, without any sign of inflammatory action; furthermore, he already had the above-mentioned enlarged inguinal gland, sore throat, roseola, and rheumatic pains at bed-time, confined to the brachii and shaft of the thigh and shin-bones.

Treatment.—Internally, the protiodide of mercury. Externally, a wash of tinct. myrrh and natu.

April 6.—Chancres healed; induration diminishing, and engorged ganglions much reduced; no caustic application was made to the chancres.

Dr. W. P. Lattimore saw the patient before the chancres were healed, and pronounced them to be the true non-inflammatory variety.

Dec. 20, 1854.—Secondary still exists, in spite of continued treatment by mercury and potash.

HENRY PECK, aged 25, native of New York, came to me on Sept. 7, 1852, with four indurated chancres, situated around the corona glandis, accompanied by the engorged ganglions. He had been variously treated since the commencement of August, by different quacks. The chancres healed rapidly under the use of black wash, but the induration remained for nearly two months, feeling, to use the patient's own expression, like so many pills under the skin. This yielded to the protiodide.

April 2.—Made his appearance again, having had connection two weeks previous, with an indurated chancre just behind the corona glandis, inside the prepuce. Both times they were of the non-inflammatory variety, and accompanied with engorged inguinal glands. The chancre soon healed with the external use of black wash.

CANCER CUTS OF THE NECK.

JOHN O'CONNOR, aged 59 years, born in Ireland, presented himself to me on the 12th April, with an ugly looking sore on the left lateral region of the neck. On examination, it was indurated, somewhat attached below, and gave off an ichorous-looking discharge. It had commenced six years previous, having the appearance of a wart, which, he said, he pulled out, bringing with it a stringy substance, since which time he has always had burning, smarting, and pricking pains in the tumor. It had gradually increased in size, becoming more painful and troublesome daily, until now it fills that space existing between the sterno-cleido mastoid muscle and the trapezius on the middle of the lateral portion of the neck.

On the same day, assisted by Drs. Van Buren and Rochester, I removed

the mass, by making two elliptical incisions around it, and dissecting it from its bed between the two muscles. Two small cervical glands were also removed; the hemorrhage was profuse, but no vessels required ligatures. The lips of the wound were brought together by stitches and adhesive plaster, in hopes of getting union by first intention.

The specimen, being examined under the microscope, presented almost every variety of cancer cells.

April 25th.—Failing to get union by first intention, the wound was left to granulate, and now is nearly filled up, but looks suspicious in the centre. Cauterized with lunar caustic; dressed with cerate.

May 1st.—After cauterizing several times with the acid nitrate of mercury, was discharged cured.

Died about six months after of acute attack of pneumonia. No return of disease.

PERISCOPE.

COLLABORATORS.

Dermatology.—HENRY G. PIFFARD, M. D., Professor of Dermatology in the University of New York.

Diseases of the Nervous System.—EDWARD C. SEGUIN, M. D., Professor of Diseases of the Nervous System in the College of Physicians and Surgeons, New York.

Diseases of Women and Children.—FRANK P. FOSTER, M. D., Gynecologist to the New York Hospital Out-door Department.

General Surgery.—EDWARD J. BERMINGHAM, M. D., Surgeon to Bellevue Hospital Out-door Department.

Genito-Urinary Diseases and Syphilis.—ROBERT W. TAYLOR, M. D., Professor of Dermatology in the University of Vermont.

Ophthalmology and Oatology.—S. B. ST. JOHN, M. D., Assistant Surgeon to the New York Eye and Ear Infirmary.

Orthopedic Surgery.—NEWTON M. SHAFFER, M. D., Surgeon to the New York Orthopedic Dispensary and Hospital.

Practical Medicine.—E. DARWIN HUDSON, JR., M. D., Professor of Practice of Medicine, Woman's Medical College, New York.

CEREBRAL LOCALIZATIONS.

AT the International Medical Congress, held at Geneva, September 10th, Dr. Broadbent, of London, read a paper upon this subject, his conclusions being based upon experimental and clinical data. The author admits the correctness of the view which places motor centres round about the fissure of Rolando in man, and he believes that localized lesions of these parts (ascending frontal and parietal convolutions) will produce correspondingly limited paralyses on the opposite side of the body. Pathology does not give us much light upon the functions of the anterior frontal and the occipital convolutions. There is no special cerebral vaso-motor centre.

As regards the central ganglia, Broadbent believes that the corpus

striatum is essentially motor, and the optic thalamus essentially sensory in functions.

Symptoms of nervous disease as produced as follows:—

- a. Paralysis is due to rupture of fibres or cells belonging to the motor mechanism.
- b. Anæsthesia is due to a break in the sensory mechanism.
- c. Tremor is the result of impeded conduction in white fibres.
- d. Convulsions (chorea included) is the result of irritation of grey matter.
- e. Early and temporary contracture is caused by pressure on a ganglion.

Professor Schiff, while admitting that there may be motor centres in the cortical substance of man, denies that the experiments of physiologists have proved their existence in animals. He thinks that, clinical observation demonstrates that the grey substance of the thalamus opticus is not sensory in function. (*Progrès Médical*, 1877, No. 38.) E. C. S.

LEAD POISONING.

M. H. RICHARDSON, *Boston Medical and Surgical Journal*, Oct. 4th, 1877, gives results of observations on seventy-five men in white lead works at Salem, Mass. General appearance of the men below that of the average workman, faces sallow, and more or less worn; sclerotic yellow. Motions far from energetic, in some cases eccentric and unsteady. Of seventy-five men all but three had the blue line on gums, and most of them suffered from obstinate constipation. Three had suffered with difficulty in speaking, three with amaurosis, several with cerebral troubles, and many with paralysis. A frequent complaint was of swollen joints and aching bones. A tradition had become established among the men that indulgence in alcoholic liquors favored the early development of the poisonous effects of the lead. "The length of time that one can work, surrounded by these poisonous exhalations, is subject to immense variations. Some men have become paralyzed in less than a month, others exist for years. One man had outworked twenty others."

D. A., age 42, has worked for twenty-five years in the worst position the mill affords—that of shovelling the dry powdered lead—and has seen forty-seven men leave the mill to die from the direct effects of the poison. Has had habitual constipation, colic, blue line, and recently cold and swollen extremities, wrist drop, unsteady gait and tremor, and yet can shovel six tons daily. * * * Dr R. has conducted an experiment to test the reputed poisonous effects of newly painted surfaces. Fresh air, passed first through white paint was next passed through dilute sulphuric acid, and finally through sulphate of soda in solution, showing that there existed no volatile compound of lead, or lead mechanically suspended in the current of air. The writer believes no salt of lead can be volatile at ordinary temperatures.

E. D. H. JR.

MITRAL STENOSIS AND PREGNANCY.

DR. ANGUS MACDONALD, in course of article on "Bearings of Chronic Diseases of the Heart upon Pregnancy and Parturition," August, 1877, *Obstetrical Journal of Great Britain and Ireland*, gives reports of twelve cases of mitral stenosis in pregnant women. "Nine cases out of twelve, or 75 per cent. fatal, which indicates a tendency to death in the combination of mitral stenosis with pregnancy, which is surely sufficiently grave, and more especially seeing that there was in none of the cases any purely obstetrical reason, such as pelvic deformity, likely to add additional risk to the delivery. Of these twelve cases, four were primiparae, of whom three died; three were pregnant for the second time, of whom two died. The other five, at time of observation, were confined for the third, fourth, sixth, tenth, and twelfth time." No proven death from embolism. A manifest tendency to abortion or premature labor with all these patients. Few carry their children to full term. Congestive bronchitis, pulmonary oedema, apoplexy of the lungs, are mentioned as the chief products of this condition.

E. D. H. JR.

THE INDICATIONS FOR DRAINAGE OF THE KNEE-JOINT.

DR. J. SCRIBA, assistant in the Surgical Clinic at Freidburg (Baden) recommends drainage of the knee-joint, instead of excision, in the following cases: 1. In acute serous inflammation, in the rare event of there being abnormal pain of sufficient severity to affect the patient's general health. 2. In acute purulent inflammation of the joint, as soon as there is distinct fluctuation; in the rare case of osteo-myelitis, involving one or both epiphyses; in the purulent inflammation which may complicate pyæmia, pneumonia, acute infectious diseases, and phlegmonous erysipelas of the lower extremities. 3. In chronic serous inflammation of the joint. 4. In fungous inflammation—(a) where the fluid secretion in the joint exceeds the fungous granulation in amount, and where the cartilage is still intact; (b) where there is excess of fungous granulation, but where caries is still absent. The presence of caries is a contra-indication for drainage, and an indication for excision. Scriba lays down the following maxim, in opposition to those British surgeons who counsel very early excision: "The earlier chronic fungous inflammation of a joint comes under treatment, the better hope is there of giving the patient a useful movable knee-joint, by means of drainage." It should be stated that Scriba only speaks of drainage applied to a joint *which is opened at the moment the tube is inserted*, and not to one in which there is a previous wound, either surgical or accidental, of some standing. The operation, as performed by Scriba,

is briefly as follows: An incision, two or three centimetres long, is made on either side of the patella, down to the joint, and a drain-tube inserted. If the bursa, under the extensor muscles, communicates with the joint, as a rule, no further incision is needed. In the rare case in which it is isolated, an incision is made down through the quadriceps femoris, and a short tube inserted. The operation must be carried out *with the strictest antiseptic precautions*. Before the drainage-tube is inserted, the joint is "swabbed" with a soft sponge, in acute cases using a five per cent. solution of carbolic acid; in chronic cases, or where there is fetidity, a twelve per cent. solution of zinc chloride. The tube is then put in, and the joint washed out through it with carbolic acid (two and a-half to five per cent.), until the solution runs clear. During the injection the joint must be gently kneaded with the hand. In acute inflammation the tube must be removed as soon as possible. The greater part may be taken out after the third or fourth dressing, if the wound is perfectly sweet, and the remainder on the tenth to fourteenth day. If the secretion does not quickly diminish, the joint must be washed out again with carbolic acid, and the drainage somewhat prolonged, but the whole tube must never be left in after the tenth to twelfth day, for fear of irritating the cartilage on which it lies. In chronic cases, or where fungosity is present, the tube must be allowed to lie across the cavity of the joint for twenty or thirty days, in order to stimulate the lining membrane.—(*Med. Times and Gazette*, Sept. 15th, 1877.)

N. M. S.

REMOVAL OF WEDGE-SHAPED PIECE FROM INTERNAL CONDYLE OF FEMUR FOR KNOCK-KNEE.

BY
MR. CHIENE. (*Edinburgh Medical Journal*, Sept., 1877.)

AT the meeting of the Medico-Chirurgical Society of Edinburgh, held on July 4th last, Mr. Chiene exhibited a boy upon whom he had operated for knock-knee. Previous to the operation, he walked with great difficulty, so great was the deformity. The result of the operation was, practically, a pair of straight legs. Mr. C. remarks that Meyer and others had shown that the real defect in knock-knee is an elongation of the inner condyle of the femur. He did not, however, accept this fully, as, perhaps, the external condyle was deficient. The result, whatever the cause, was that the tibia was thrown out of its proper axis. Dr. Ogston, of Aberdeen, had narrated a case,* where he had operated by sawing obliquely through the internal condyle. Mr. C. was afraid that, in pursuing this plan, he might interfere with the crucial ligaments. He had accordingly operated in the following manner: Taking the tubercle into which the tendon of the adductor magnus is inserted as a guide, a vertical incision is made through skin and fascia; then, on drawing these aside, the oblique fibres of the vastus externus can be seen in front, and the periosteum exposed. The internal articular artery is next secured

* See *Hospital Gazette and Archives of Clin. Surg.*, Oct. 1st, 1877.

by a double ligature, and divided. Lastly, the periosteum is raised up, and a wedge-shaped piece of bone is cut, by chisel and mallet, from the substance of the internal condyle. By gentle pressure the leg is now brought to its normal axis. The knee-joint is not opened. In the case exhibited, the wounds in each leg healed in a fortnight, but splints were kept applied for two months. Esmarch's bandage and careful antiseptic measures were used during the operation. The immediate after-treatment is not stated.

N. M. S.



INFLUENCE OF SULPHATE OF ATROPIA ON NIGHT SWEATS, AND IN THE PROGRESS OF PHTHISIS.

OETTINGER (*Wiener Med. Presse*, 1877, No. 34), employed sulphate of atropia in 45 cases of phthisis. The solution contained one and a fifth grains to the ounce of distilled water, of which 10 to 20 drops were given daily. In 12 cases the sweats disappeared with the first dose, and did not return. In 18 cases the sweats reappeared when the medicine was suspended, and he found it necessary to renew for a long time, with care to have occasional intervals of four to eight days. The only disagreeable results were slight pruritus of the neck, and dilated pupils. He concludes the influence of sulphate of atropia on the temperature is absolutely negative. It also has no effect in checking the progress of the disease, except so far as the night sweats are lessened, and the invalid rests better.

E. D. H., Jr.

ABOUT BOOKS.

Transactions of the International Medical Congress of Philadelphia, 1876.
Edited for the Congress by John Ashurst, Jr., M. D. Philadelphia, 1877.

THIS work is a large imperial octavo volume of no less than 1,153 pages, containing, with a few slight omissions, all the papers read before the International Medical Congress, both in general session and in the sessions of the several sections. The volume also contains the minutes of the meetings, lists of officers of the congress, and of the various sections, and also of the delegates to the congress.

It would be utterly impossible, in the short space allotted to us, even to attempt to give a list of the articles contained, and much less to give an idea of the scope and variety. Suffice it to say that there is no branch of medicine which has not been touched. Most of the articles are very properly condensed, and the whole gives an epitome of the status of medical science at the present day.

Among the list of contributors to the volume we notice the names of many of those gentlemen who have attained a prominent position among the profession of this country, and some of whom are known wherever the light of science has penetrated. There are also a number of papers, and remarks during discussions, by many distinguished foreigners, and especially by our British cousins, but we notice a marked absence of visitors from Germany, though there were a number of gentlemen present from Russia, Norway, and Sweden. However, the work is cosmopolitan in character, and we hope that it will not be many years before we have another similar gathering of the shining lights of science on our shores.

The task of editing the volume must necessarily have been a very arduous one, and we think that the gratitude of the profession is due to Dr. Ashurst for the able and thorough manner in which he has fulfilled the laborious office.

THE HOSPITAL GAZETTE

AND

ARCHIVES OF CLINICAL SURGERY,

A Semi-Monthly Journal of Medicine and Surgery,

EDITED BY

Edward J. Birmingham, M. D., and Frederick A. Lyons, M. D.

VOL. 2, No. 11.

NEW YORK, DECEMBER 15TH 1877.

WHOLE NO. 20.

CONTENTS.

EDITORIAL.

	PAGE.
Hospital for Diseases of the Rectum.....	321
A Retrospective Glance.....	322

LECTURES.

Lectures on Paralysis and Convulsions as Effects of Organic Disease of the Brain: By C. H. BROWN-SEGWARD, M. D. etc. Lecture III.....	324
Clinical Lecture on Albumenoid Degeneration of the Liver, and on Abdominal Tumors: By W. M. PEPPER, M. D.....	329

HOSPITAL RECORDS.

ROOSEVELT HOSPITAL, NEW YORK. REPORTED BY E. ERETZKY, M. D.	
Chronic Dysentery and Abscess of Liver. (Service of Dr. DRAPEE)	333

PERISCOPE.

STOERER on the Arsenical Atmosphere and Arsenical Hot Spring of Pozzoli, in the Cure of Consumptives. (Dr. HUDSON).....	335
GETTINGER on Salicylate of Soda in Acute Rheumatism and other Febrile Diseases. (Dr. HUDSON).....	336
POTAIN on Pathogenesis of Xanthoma, or Yellow Patches of the Skin. (Dr. HUDDSON).....	336
BRUCA on Cephalic Thermometry. (Dr. SEGUIN).....	337

EDITORIAL.

HOSPITAL FOR DISEASES OF THE RECTUM.

We are pleased to see that a successful effort has at last been made to found an institution in this metropolis for the treatment of diseases of the rectum. It is quite evident that the importance of this class of diseases has not been generally recognized by the profession, and it is just as evident, at the same time, that the charlatans have taken advantage of this apathy on the part of the profession, and have succeeded in monopolizing, almost entirely, patients suffering from these distressing, yet simple maladies. The treatment of rectal diseases occupies the same place to-day as venereal diseases did years ago, before an enlightened profession wrested it from the hands of charlatanism; and it remains for us now, not to constitute it a specialty, and consign it to special practitioners, but to conscientiously and thoroughly study the nature and treatment. We are not to regard this class of diseases as requiring any special skill in diagnosis or treatment. It does not. We need but to use our senses, and to

examine the cases as thoroughly as if the disease was situated on any other part of the body. It is a false delicacy which induces a physician to forego an examination of a diseased rectum; and such a course will most assuredly redound both to his own and to his patient's injury. When attended to properly, no class of diseases offers more brilliant results, but, when treated empirically, the consequences are often disastrous. When we couple this fact with a statement which Mr. Allingham makes in his work, that "rectal diseases are the most common that affect civilized humanity," is it not surprising that more attention has not been bestowed upon them by the profession?

An effort in the right direction, however, has at last been made. On the evening of the 10th inst., a number of gentlemen interested in establishing such an institution as might afford proper treatment to all, and especially to the poor, met at the office of Dr. Edward J. Bermingham. Esq-Judge M. C. Gross was chosen as chairman *pro tem.*, when a Board of Managers was organized, and the following officers then elected:—Mr. Joseph C. Tracy, the Peruvian Consul in this city, President; William Lindsay, Vice-President; Dr. Edward J. Bermingham, Secretary; M. V. B. Travis, Treasurer. The following Medical Board was then organized:—Consulting Surgeons, Drs. Willard Parker, Wm. H. Van Buren, Frank H. Hamilton, and Henry B. Sands; Surgeon, Dr. Edward J. Bermingham. This staff will be increased from time to time, as the requirements of the institution may demand, by the appointment of assistant surgeons.

At a subsequent meeting of the Board of Managers it was determined that the institution be known as the GOOD SAMARITAN HOSPITAL, and that the dispensary department be opened immediately.

A committee was appointed to secure suitable quarters by the 1st of January, when it is hoped work may be begun.

To avoid the abuse of this charity, the managers have decided to adopt the "Provident System," as the following extract from their by-laws will show:

"No member of a family whose income is over ten dollars a week shall be entitled to gratuitous treatment. Those families whose income is between ten and fifteen dollars per week, shall be required to pay ten cents per week while under treatment in the dispensary department. Where the income is over fifteen dollars, but does not exceed twenty dollars, they shall be required to pay twenty cents per week. Where the income exceeds twenty dollars per week, the rate per week shall be fixed at the discretion of the surgeon. All moneys received from this source shall be handed to the treasurer at the end of each month."

A RETROSPECTIVE GLANCE.

WITH the present number of the journal we complete our second volume, and now, for the first time in our journalistic career, venture to call attention to our achievements. We think that since we first appealed to

the profession for encouragement in the enterprise upon which we were venturing, we have striven to fulfil the pledges then made, and have labored earnestly to accomplish the object we had in view, viz.: the establishment of a cosmopolitan journal, one which should be published in the interest of the profession of the whole country, and which should remain uncontrolled or uninfluenced by any local "ring." The struggle has been great, but the satisfaction of having achieved what we had set out to do, is still greater, and we can now point with just pride to the *GAZETTE*, as the representative journal of the profession. This is not a mere idle assertion, but one which may be substantiated by an examination of our numbers, issue after issue. The most distinguished men from all quarters of the union recognize the *GAZETTE* as the most desirable medium for communicating their ideas to the profession. It is not often, and we doubt whether it has ever been, the fortune for a medical journal to point to such a list of contributors as those who have honored our pages with their articles during the past eighteen months. HAYES, AGNEW, PEPPER, GOODELL and MEARS, of Philadelphia; CHISOLM and TIFFANY, of Baltimore; ANDREWS and BYFORD, of Chicago; BLAKE, CHEEVER and WHITE, of Boston; COWLING, of Louisville; DAWSON, of Cincinnati; EVE, of Nashville; BATTEY, of Georgia; TABER, JOHNSON and REYBURN, of Washington; McGRAW, of Detroit; MINER, of Buffalo; POOLEY, of Columbus; WIGHT, of Brooklyn; PARKER, CLARK, CROSBY, DELAFIELD, FLINT, HAMILTON, HAMMOND, HOWE, JACOBI, JANEWAY, LITTLE, LOOMIS, MASON, OTIS, PIFFARD, POLK, POST, SAYRE, SMITH, TAYLOR, THOMAS, THOMSON and WEIR, of New York. Even on the other side of the broad Atlantic the merit of our journal is recognized, as evidenced by the communications from those distinguished lights of the profession, HOLMES, of London, and BROCA, of Paris.

We have bestowed the same amount of attention on the other departments of the journal, and we are proud to see that many of the old periodicals are imitating our example of furnishing CLINICAL LECTURES, and are bestowing more attention to their HOSPITAL RECORDS.

In our *PERISCOPE*, we still hold the lead, thanks to the industry of the gentlemen having charge of the several departments. No other journal has as yet attempted the undertaking of presenting an analysis of current medical literature by responsible and able collaborators, that work being generally done in a very careless manner. There is but one journal that we except from the above criticism: *The Boston Medical and Surgical Journal*, all the departments of which are ably conducted, and which justly deserves the position it has attained.

EDITORIALLY, we have endeavored to stand for the enlightenment, support and advancement of the profession. If, in doing this, we have given offence to such men as SAYRE, of New York, and that notorious *attaché* of Buchanan's Diploma Mill, POLK, of Philadelphia, we do not regret it. Our journal belongs to the profession, and we have but done our duty to it and to our subscribers. Many new facts have come to our notice in reference to the controversy between Dr. S. and ourselves, which we shall present to our readers at an early day. We have also become cognizant

of the unprofessional and ungentlemanly conduct of several members of the profession, and several journals seeking the support of the profession. Among other matters of importance we shall soon have occasion to refer to these. We shall strive hard to maintain the honor and dignity of the profession, and in our efforts to do this we shall expose fraud and corruption, wherever found, whether in the top rank of the profession, or among the disreputable *attachés* of a still more disreputable institution legalized to disgrace the profession in America.

In conclusion, we point to our past history, and promise to continue in the line of our duty, and to improve the GAZETTE wherever and whenever it be possible.

LECTURES.

LECTURES ON PARALYSIS AND CONVULSIONS, AS EFFECTS OF ORGANIC DISEASE OF THE BRAIN.

Delivered at Bellevue Hospital Medical College,

BY

C. E. BBOWN-SEQUARD, M. D., Etc.

LECTURE III.

GENTLEMEN:—I have endeavored in the two preceding lectures to bring forward facts which prove that paralysis and convulsions are not due to the causes that are now generally admitted to obtain by most physicians. I have tried to show that paralysis, instead of being due to a local lesion in a direct way, is caused by an irritation starting at one point, and propagated to cells at a distance. The phenomena are not due to a loss of function in that part in which the disease exists, but to an irritation starting from such a point, and carried to other parts at a distance. To take a single instance, the cells of gray matter that serve, or are put in action, when the will is exercised, to lift the arm. These cells are not aggregated in one particular spot, but are scattered all over the brain, and, if loss of power of moving the arm exists, there is a loss of functional activity of the cells that produce it. As they are scattered, destruction of a considerable portion of the brain will not cause a loss of power to produce these movements, as there will still be some of this class of cells left able to perform their function. Paralysis, then, is simply a loss of functional activity. It is the same phenomenon as occurs when we produce paralysis of the heart, by galvanizing the par vagum. In every instance an irritation starts from the place where the disease is situated, whether it be in the cerebrum or cerebellum, and causes an arrest of activity at a distance. This view is in harmony with all the facts that are observed, and explains them much better than any other theory that I know of. A theory, in order to be true, must have all known facts either in perfect harmony with it, or clearly prove the conclusion; and also there must be no fact in opposition with it. Such is not the case with the theories in general acceptance, as I have

endeavored to show, but to my knowledge there is no fact yet observed that is in discord with the view I set forth, and it explains all the known facts; it therefore complies with the conditions. Whether I am absolutely right, or the future still keeps in reserve facts which will show my theory to be incorrect, time alone will determine; but at present it offers an explanation for all the phenomena of disease of the nervous system. One series of facts is certainly most evidently in harmony with this theory. I have already said that all kinds of paralyses, of an infinite variety, may follow from brain disease, wherever located. I have published many facts, observed by the best and ablest clinical writers in the profession, and not recorded by myself, having carefully abstained from including my own cases, and they have established these points. According to the old theories, a lesion in one half of the brain, no matter where located, could only produce paralysis by being in those parts that are considered as centres of voluntary motion. But there are numerous cases of paralysis due to disease situated entirely outside of the voluntary motor apparatus. If the disease be in the voluntary motor apparatus, it ought to produce paralysis in those parts of the body controlled by such portions of the brain, according to the seat and extent of the lesion. Suppose the lesion to be on the left side of the brain, it should produce paralysis on the right or opposite side of the body. Now it so happens that in at least one in every two or three hundred cases, the paralysis exists on the same side of the body as the lesion. This, then, is the first discrepancy between the facts and the old theories that attempted to explain them. Again, the paralysis may only occur in one limb on the opposite side of the body, and this fact is a second point. Moreover, the paralysis may appear in one limb only, without the disease being found in that particular portion of the brain supposed to be the centre for that limb. The face can be paralyzed when the lesion is situated at a distance from the supposed centres controlling the action of its muscles. In thirty or thirty-five cases in which paralysis occurred only in the face, the disease was not in that part which has been considered as its motor centre. The tongue may be paralyzed on one side only, and that on the opposite side from what it should be. There are a number of such cases published. The tongue alone can be paralyzed, but this happens less frequently than the same occurrence in the face, when there is a lesion above the pons Varolii. This is an extremely important point. This lingual paralysis appears by far more frequently on the same side as the lesion than does paralysis of the limbs. The muscles paralyzed almost exclusively when there is a lesion in the spinal cord or medulla oblongata, are paralyzed when the disease is in the cerebellum. In such cases associated movements are apt to suffer. Broadbent, of London, attempts to explain these phenomena by the supposition of a common centre connected with each side, and capable of being excited by either singly. There is no necessity for such a hypothesis. We may have a lesion on one side of the brain, with paralysis of both sides of the neck; or the muscles of the trunk may be affected on one or both sides, either on the right or wrong side. Some of these facts are extraordinary, and there may be an infinite variety of results from a disease in any one particular portion.

A lesion limited to one-half of the brain can produce a paralysis in the two upper limbs, and the paralysis may be as perfect on the wrong side as on the right. In all of these cases, unless you admit that the autopsy has been badly made, or that all of the lesions were not discovered, you must admit that the theories are wrong. However, it does not prove, because we find no lesion, that none exists. Our means of exact diagnosis are not by any means perfect, and a lesion that is actually present may possibly escape the closest observation. But, on the other hand, there are numerous cases in which no such doubt could exist. For instance, if a healthy man, who has never had a trace of paralysis, has a sudden cerebral hemorrhage, which causes paralysis of the two arms, in a short time he dies and the autopsy is made. We then find extravasation of blood on one side, but never find it in the two supposed centres together. I have searched carefully, and have the best means of knowing, but have never found the record of a single case in which it existed. There are, however, a number of such cases of hemorrhage that have caused total paralysis of the two arms, and the autopsy has showed a lesion existing only on one side. In such a case we cannot but admit that all the lesions have been seen.

In paralysis of the lower limbs, we find the same facts, and even more strongly proven. There are many more cases, of the class of which we are speaking, of paralysis of the legs than of the arms.

In a number of well-authenticated cases disease in the cerebrum has produced paralysis in the two lower limbs, where it has no business to produce any paralysis whatever, in a portion of the brain entirely outside of the motor apparatus. Paralysis from such a local lesion is impossible, and still less should the two lower limbs be affected. If you call paralysis merely a loss of power, it should never occur in such a case.

As regards paralysis of the lower limbs, a great many cases are on record, but some of them certainly leave some doubt. When paralysis of the lower limbs appears slowly with loss of power of the sphincters of the bladder and rectum, we usually know that the disease is in the spinal cord. In those cases, then, in which the spinal cord has not been thoroughly examined, there is doubt. But here again the same reasoning comes into play. Suppose we have a case of softening from embolism of the Sylvian artery, with paralysis of the lower limbs, in a healthy man, with no disturbance of the sphincters, if no other lesion is discovered then the case is clear. It is not likely that any other disease has existed in the cord which was not discovered.

In cases of hemorrhage in the brain, which has destroyed life rapidly, these facts are still more evident. If paralysis of the lower limbs has appeared, it is the most natural supposition that the hemorrhage caused it. If you say that in some of these cases the examination has not been thorough, or that all the existing lesions were not discovered, I am willing to agree with you, but it is then reduced simply to a question of the number of cases. You cannot in every case say that there was another cause for the symptoms.

The nervous system is a whole, a unit, and not a system of different

parts or centres simply connected together. It may be put into play throughout its whole extent at once. The whole of it may be called into activity by a single movement, as the mere lifting of the arm, and all the facts that I have related at length, show that an irritation in any one part of this system will cause a change to take place at a distance, by propagation. There are many strong arguments against the theory that loss of tissue, or disease in any one part of the nervous system, will cause a special paralysis.

Now, to pursue this line of argument still further, not only can we see the two lower or the two upper limbs paralyzed together, from disease of one-half of the brain, but we may see three limbs affected. It may be the two legs and the right arm, the two legs and the left arm, or the two arms and the right or left leg. It may be said that some lesion remained undiscovered in these cases, but the same reasoning given in former cases may be applied here with equal force.

We may likewise find a great many other kinds of paralysis. There is a form in which the face is paralyzed on one side, and the body on the opposite, due to disease in the pons Varolii. This was termed "paralysie alterne," by my friend Dr. Gubler, of Paris. Now, with this kind of paralysis, the disease may be situated in other parts of the brain, as the corpus striatum, on one side. I have published a number of such cases. This is a fatal objection to the admission of the old theories to have disease of the left corpus striatum with paralysis of the face on the same side, and of the limbs on the opposite. If you are not aware that such a thing may occur, you will in many instances make a false diagnosis. The diagnosis bears greatly on the treatment and prognosis, and, if the one be false, the others would be wrong. A difference in diagnosis would make great alteration in the prognosis especially, for usually a disease in the pons Varolii is much more rapidly fatal than disease in many other portions of the brain.

What I have said of the face is true of the tongue and eye. There is a kind of alternate paralysis of the tongue, as well as of the face. If the third pair of nerves is paralyzed, the muscles of the upper eyelid, as well as some of the internal muscles of the eye, will be paralyzed. All the muscles, except the external rectus and the superior oblique, will be unable to act. Cross paralysis of this kind occurs, and there are two or three perfectly clear cases. This certainly is a deadly blow to the old theories.

The diaphragm may sometimes be paralyzed, when the lesion is very high up in the brain, above the origin of the phrenic nerves, and there is no lesion lower down.

There are, moreover, muscles not altogether under the control of the will which are very frequently paralyzed from disease of the brain, and these facts are likewise exceedingly favorable to my views. There are certain muscular actions that take place only under the influence of reflex action: among these is the process of deglutition or swallowing. In certain cases the oesophagus cannot perform its function properly, when the reflex power of the cord is paralyzed by some disease.

The same thing occurs with the sphincters of the body, as those of the

rectum and bladder. It is not rare in such cases that, instead of there being difficulty with the retention of the contents of these viscera, there is difficulty in voiding them. These phenomena usually occur in disease of the spinal cord. Now in certain cases of brain disease, where the spinal cord is in an apparently normal condition, we find paralysis of these sphincters as well as of the oesophagus. It may be objected that a lesion of the spinal cord has escaped observation, but the objection is answered in the same way as in the previous instances. The true statement of the facts is this: that disease of the brain produces an arrest of activity in the cells of the medulla oblongata, in the case of the oesophagus, and in the lower part of the spinal cord in the case of the sphincters of the rectum and bladder. An inhibitory effect is produced on these cells. In these facts there is strong proof that a clear inhibition or arrest of activity in the cells of the spinal cord can be produced by disease in the brain. Now, we have still stronger evidence of this fact, because in experiments on animals it is more plainly seen, and leaves no room for doubt. If we cauterize the surface of the brain with the actual cautery, we frequently get loss of power of the sphincters, without any lesion of the spinal cord that can be discovered by careful inspection and microscopic examination.

Now, if you try to examine closely the new views, you will find that all these facts are in perfect harmony with them. It cannot be otherwise; and it must be that when there is paralysis of both sides of the body, where the lesion is situated only on one side, an irritation is carried from the place of the lesion to the other side. Now, if we turn our attention to hemiplegia, and look carefully into its history, we shall see all these facts still further substantiated. There is no complete hemiplegia ever existing alone. I have never in all my experience seen a case of complete hemiplegia without there being some paralysis on the other side of the body. This fact is chiefly noticeable in the legs. There seems to be from a lesion in one-half an influence exerted on the other side. There is only a difference in degree between the two sides of the body; one side is paralyzed more than the other. If you ask the patient to stand on the sound limb, he cannot do it well, and simply from the weakness of the limb alone; from no other cause does it arise. You might say that the force or power itself is not altered, but that the patient's inability to perform the act arises from the muscular sense being affected. This, however, is not so. This objection can be obviated by testing the power of the limb in other ways than by standing on it. I have tried the power of the limb in other ways, and have found, without doubt, that the force itself is lost to a certain extent. There can be no reason for a diminution of power unless there was a transmission of irritation to the other side from that on which the lesion occurred.

A second point is this: that, however various the causes of hemiplegia, as regards its nature, seat and extent, the same group of symptoms usually occurs. No matter where the lesion be situated, in most cases, after recovery from the first symptoms takes place, the patient has a much more complete paralysis of the arm than of the leg. There are, however,

exceptions. There are three muscles of the face coming to the angle of the mouth that are usually affected with paralysis in these cases. This is the typical form of paralysis in brain disease, and we usually find it the same no matter what the nature, seat, or extent of the lesion. These facts, then, form a strong argument against the view that paralysis depends on a loss or destruction of either the centres of will for the muscles involved, or of the conductors. If such were the case, we should be obliged to admit that the centres are located in different places in different individuals. The almost uniform type of hemiplegia exists with a very great variety of diseases. A third point is, that in a minority of cases a great variety may exist according to the seat, nature and extent of the causal lesion. We may find the reverse of what is supposed to be true,—a paralysis appearing on the same side of the body as the lesion. On the other hand, there are some cases in harmony with the old view, but not in discord with the new one; and I am glad it is so, in order that there may be some excuse for the vast number of physicians who still adhere to it.

Again, as regards hemiplegia, it may appear and disappear although the lesion that produced it is constant. How can you reconcile the idea that paralysis is owing to the destruction of tissue, with the fact that, while the very same destruction persists, the paralysis disappears? You may say that there are changes in congestion and circulation taking place in the diseased portion of brain tissue, but suppose that both the frontal convolutions, supposed centres of motion for the arms, are entirely destroyed, even in these cases the paralysis may be intermittent. It may act in the same way as a malarial fever. Certainly in such a case the fact is a final death-blow to the old theory.

Hemiplegia can sometimes be cured, and sometimes it disappears suddenly of its own accord. In this fact, also, we have clear proof that we should set aside the old views that paralysis is due to a loss or destruction of centres or conductors.

CLINICAL LECTURE.

Delivered at the Hospital of the University of Pennsylvania.

BY

WILLIAM PEPPER, M. D.,

Professor of Clinical Medicine in the University Medical School.

1. ALBUMINOID DEGENERATION OF THE LIVER.
2. ABDOMINAL TUMOR—ENLARGED SPLEEN.
3. FLOATING KIDNEY.

ALBUMINOID DEGENERATION OF THE LIVER.

I BRING before you to-day a young patient admitted to the wards on the 6th of October. The child had been coming to the dispensary for some months previous to that date. As you see it to-day, it is a desperately ill child. When admitted to the wards it was suffering from general *malaise*, with *œdema*, principally marked in the legs, but also noticeable in the arms and face. There was also a constant, draining diarrhoea. The urine has always been passed freely, and contains no

albumen or tube-casts. The child has never had scarlet fever or measles, diseases which often give rise to affections of the kidneys. In consequence of the diarrhoea, and general lack of tone in the circulation, I ordered the child placed on chalk mixture and digitalis, when it first came under my notice. Injections of jaborandi were also employed to relieve the dry skin and feverish condition of the patient. This treatment by jaborandi, contrary to my expectations, produced profuse diuresis, and no sweating. Let me call your attention to the constant discharge of sanguous pus from both the child's ears. You also notice the crops of petechiae under the skin of the body, arms and right leg. When these crops have come and gone, you see they have been followed by a slow desquamation. (Petechiae are effusions of blood under the derm.)

The child has been given good, strong, nourishing food, and, as medicines, iron, quinia and arsenic have been employed. In spite of our care, however, the little patient is rapidly sinking, and I fear will not survive much longer.

Now what, let me ask you, is the nature of this case? There is no nephritis, for the most painstaking examination of the urine has failed to reveal any albumen, or tube-casts. The idea of scurvy or inanition is put out of the question by the fact that the child has been under fair circumstances and careful nourishment for the past six weeks, and yet has been constantly getting worse. I find no cardiac and no pulmonary disease, but percussion shows me that the liver is enormously enlarged, its lowermost point reaching to the middle line of the belly, about half an inch above the umbilicus. The surface of the organ is smooth, and pressure over it gives rise to no pain. I can discover no enlargement of the spleen.

Now, it is well known that albuminoid degeneration of the liver very frequently follows purulent otorrhoea, and is attended with just such a scrofulous cachexia as we find here. I must add that it is very unusual to find albuminoid degeneration limited to one organ, as in this case, but for all I know, the disease may have already begun to affect other organs. We generally date albuminoid degeneration of the kidneys from the appearance of albumen in the urine, and degeneration of the gastro-intestinal mucous membrane from the presence of blood in the stools. Neither of these symptoms, as I told you, has yet appeared.

The usual symptoms of albuminoid degeneration may be briefly mentioned, as follows: progressive gradual failure of health; marked anaemic and scrofulous cachexia; loss of flesh and strength; degeneration of the walls of the small blood-vessels, followed by hemorrhages under the skin, producing petechiae, a general predisposition to leakage of serum and blood-disks from the blood-vessels, bringing on haematemesis and bloody stools, with general anasarca. When the kidneys are involved, the symptoms of dropsy develop very rapidly. When, as in the present case, the liver is chiefly affected, there is usually marked abdominal dropsy. As the patient grows weaker, the mass of the blood goes down, and with it the dropsy. You see how true this statement is shown to be in the present case. Some weeks ago there was very marked anasarca; now we only notice it in a slight puffiness of the face and lower extremities.

The child, though stupid, has never developed any wandering squint, either divergent or convergent, so I am pretty safe in saying that there is no specific brain disease, though there may be, and probably is, passive effusion into the ventricles.

Purulent otorrhœa is generally the result of specific fevers, which give rise to inflammation of the throat and ear, and perforation of the tympanum. This child has never had any specific fever, and so we must seek a cause elsewhere. Disease of the bones of the inner ear very frequently follows syphilis and scrofula. There are no fissures in the child's lips, and the teeth are well shaped, showing none of Hutchinson's notches on the incisors. We must consider, however, that we are examining a primary set of teeth, and that these syphilitic signs rarely show themselves before the development of the second set of teeth. I can find out but little concerning the child's parents. There, probably, has been syphilis in the family.

Despite the best treatment, and most watchful care, the little thing is very rapidly sinking and will soon be beyond the sphere of our remedies.

ABDOMINAL TUMOR—ENLARGED SPLEEN.

This little boy is 11 years old, and was admitted into the hospital two days ago. He tells me that he had chills and fever some years since, and that the fever has never left him entirely. Upon examination of the abdomen I find that it is very much enlarged on the left side. When the boy expires the right side sinks in more than the left. I cannot elicit any fluctuation upon palpation. Percussion shows resonance all over the lower part of the belly, down to the pubis. The percussion is quite dull over the left hypochondrium, as compared with the right. There is evidently a hard body extending down as far as the level of the umbilicus. This tumor is six inches long, and four inches and a half in its greatest transverse diameter. Its edges can be distinctly felt by the finger. It is a solid mass, with a rounded edge, and is, to a certain extent, movable. The position of this mass suggests the spleen; it has the general shape and rounded edge of the spleen. This identification is confirmed by the history of the case. The spleen is very often enlarged as the result of malarial poison. The enlargement of the spleen from this cause may be truly enormous. I have a specimen of an enlarged spleen weighing fully eleven pounds. Such spleens fill at least two-thirds of the cavity of the abdomen.

In enlargement of this organ from malarial causes, dissection shows congestion and hypertrophy of the pulp of the spleen, with thickening of the trabeculae and fibrous elements.

We find no difficulty in the diagnosis of such cases. What are their results? These differ very much according to the state of the blood. Serious obstruction of the venous circulation will produce very pronounced anaemia and cachexia, with tendency to abdominal dropsy. The serious distension of the vessels causes leakage of blood, and hemorrhage from the bowels and stomach. There is a painful sense of weight and dragging. If there is any peritonitis, there may be local tenderness.

In the treatment of an enlarged spleen, our first effort must be directed

to the removal of the patient from the malarial locality, and the use of good hygienic influences. As regards tonic medicines, iron, arsenic and quinia, are the most valuable. The bowels should be kept in condition by saline mineral waters, with an occasional mercurial. As alteratives, the biniodide of mercury and the iodide of potassium, in minute doses, will often be followed by a decided reduction in the size of the spleen. Mercurial ointment, applied locally, is occasionally of value. Ergot may be injected, hypodermically; in the region of the spleen some have even injected ergot into the substance of the enlarged viscus. This latter process I consider dangerous (1), because there might be a loop of intestines caught up by the spleen; (2) because such an injection might be followed by a serious local abscess, and (3) because I think that an injection under the skin answers the purpose just as thoroughly. We use here an injection containing 96 grains of ergot to the half-pint of glycerine and distilled water (and one drachm of glycerine and seven ounces of distilled water.) This gives one grain of ergot to each five minims of the solution. In the case of a child five minims may be injected. In that of an adult ten to fifteen minims, every two or three days.

FLOATING KIDNEY.

This patient is a rather stout sallow-complexioned woman, of fifty-four. She has all her life been troubled with obstinate constipation. One day about two months ago, she suddenly noticed a tumor under her ribs, on the right side. This tumor would come and go. It gave her no pain, and has been attended with no symptoms of any kind. Her belly has always been large, but this is due to relaxation of the abdominal walls. The tumor which I am now able to grasp in my hand, is small, hard and kidney-shaped. It is very movable; can be pushed a considerable distance. Upon pressure it sinks deeper and deeper into the cavity of the abdomen. I believe this tumor to be the woman's right kidney. Her general health is too good to suppose the case one of malignant disease; and furthermore, there is no obstruction to any part of the intestinal canal. The tumor is not the seat of any pain, and came on very suddenly. Its shape and size are exactly those of the kidney. When I percuss in the right renal region I get resonance in place of dulness. This last fixes the diagnosis.

There is no treatment in such a case. You can only assure the woman that it is not any diseased growth. In some cases a truss may be worn. This accidental displacement of this organ is probably the result of a sudden strain, while the kidney attachments were relaxed.

HOSPITAL RECORDS.

ROOSEVELT HOSPITAL, NEW YORK.

Reported by ETIEN EVETZKY, M. D., House Physician.

CHRONIC DYSENTERY, AND ABSCESS OF LIVER. (SERVICE OF WM. H. DRAPER.)

WILLIAM MORTON, aged 42,—Ireland,—married,—laborer,—admitted June 5th, 1877.

Previous history.—Family history good. Temperate habits now, but previous to ten years ago was a hard drinker. Never had rheumatism; denies syphilis. Had ship fever twenty-five years ago and was attacked with pneumonia nine years ago. Since then was in perfect health, up to ten months ago, when he was in Norfolk, Virginia. At that time his bowels were costive; he was taken with gripping pains in his abdomen and had several evacuations from the bowels, and on examination he found the stools contained some blood. This has continued up till now, without intermission, excepting that on some days there would be a decrease in the number of passages. At present he has from six to seven passages per day, containing mucus, blood, and very little solid material; has a great deal of tenesmus for past four months; has vomited a great deal in the morning, vomited matter being of a greenish color, but has not vomited for last five or six days. Patient has no cough, no pain in chest, no night sweats. Never expectorated any blood, and expectorates very little. Has headache occasionally.

Present condition.—Fairly nourished, appetite poor, tongue coated, moist. Pulse 104 temp. 99°. Urine acid, 1029 urates.

Examined by Dr. Draper. *Liver*, dulness extends two inches below free border of ribs. *Lungs*, some dulness under left clavicle and left suprasternal fossa, but no modification of respiratory or vocal sounds.

Patient was put on

Magn. sulph. dr. ii.

Ferri. sulph. grs ii.

Ac. sulph. dil. M. xx.

Aq. ad. oz. iv. M. Sig. every morning,

and quin. sulph. grs. vj t. i. d.

Patient's condition gradually began to improve, and since June 15th he did not pass any more blood, only mucus; tenesmus and gripping remaining; number of passages from five to eight a day.

July 1st.—Dr. Thomson visiting. Previous medicines stopped.

Ordered:

R

Cupri. sulph. gr. $\frac{1}{2}$

Rezin. terebint gr. iiij. in pil. t. i. d.

also an injection containing laudanum gtt. x. and borax gr. xx.

Patient's condition remained about the same till July 18th, when he

began to have pain in abdomen, more on right side; this was gradually getting worse.

July 26th.—He vomited a number of times.

July 29th.—Region of ascending colon was ordered to be painted with vesicating collodion.

July 30th.—Pain became very severe, and a swelling hard, tender and dull, on percussion, appeared under free border of ribs on right side, swelling evidently connected with liver. Patient became a little feverish, no chill. Ordered poultices and quin. gr. vj t. i. d.

August 1st.—Dr. Delafield visiting. Examined liver. Dulness extends to three inches below free border of ribs. Probably abscess of liver. Pain became less severe. Bowels became constive, and injections of ox-gall were ordered to be given every few days. Temperature did not rise very high. Swelling was gradually increasing in size.

August 7th.—Liver dulness extended from sixth rib to one inch above Poupart's ligament, and within one inch of umbilicus. Patient began to complain of numbness and pain in right buttock and thigh, and shooting pain running down in right groin, with some swelling.

August 12th.—Pain began to increase, and

August 14th, patient complained of dyspnoea.

August 17th.—Over a portion of swelling, which by this time increased considerably, fluctuation could be detected. Superficial abdominal veins became enlarged; right leg became swollen. Patient occasionally vomited. A hypodermic was introduced in the tumor, and pus and blood mixed was withdrawn. Then an incision about two inches long was made in right lumbar region, and about 90 ounces of a dark and bloodstained pus escaped, causing considerable decrease in the size of the tumor; pus had bad odor. Patient experienced immediate relief, and feeling of pain and numbness in thigh and groin disappeared. A drainage-tube was then introduced into the cavity, which ran in an upward, inward, and backward direction, and wound covered with a carbolic acid dressing.

August 19th.—Swelling again began to increase; more pain. Drainage-tube removed. Poultices applied.

August 21st.—Tumor was steadily increasing. To-day, during an effort to get up, patient experienced something giving way, and about 60 ounces of pus escaped from the wound. Previous to that, discharge from it was scanty, but since discharge was considerable. Swelling collapsed. Patient was very much relieved. Poultice continued. From that day patient began to improve, but bowels remained constive, kept regular by means of injection.

August 27th.—Cavity was ordered to be washed out three times a day by means of irrigator, with a solution of grs. viij. Chloride of zinc to Oj of water. Discharge began to decrease; general health steadily improving.

Sept. 10th.—Opening was dilated with a sponge-tent, as it was closing up.

Sept. 18th—Patient was allowed to sit up. Gaining flesh and strength. Temperature in the morning normal, and evening seldom above 99°.

Sept. 23d.—Opening dilated with a sponge-tent, very little discharge.

Sept. 30th.—A drainage-tube introduced to keep opening from closing up. Probe passes three inches. Bowels become loose, ordered:

Rx

Ferri Pernit gr. i

Ext. opii. gr. $\frac{1}{2}$ in pil. t. i. d.

Oct. 8th.—Opening was closing up. Sinus was dilated by means of urethral sounds, and tracheotomy-tube inserted, as rubber tubing was irritating. Patient is troubled with diarrhoea for last few days. General health improving rapidly. Discharge from sinus scanty.

Oct. 16th.—Pain in abdomen and rectum; passes mucus from bowels; some tenesmus. Sinus measures about two inches.

Nov. 12th.—No improvement in dysentery. Discharge from sinus almost ceased.

Dec. 1st.—No discharge from sinus; it measured about one and a half inches. Rectal injections of one drachm of iodoform to one ounce of glycerine twice a day.

Dec. 5th.—Passages only two to three a day. No tenesmus; no blood since injections of iodoform; only a little of mucus.

PERISCOPE.

COLLABORATORS.

Dermatology.—HENRY G. PIFFARD, M. D., Professor of Dermatology in the University of New York.

Diseases of the Nervous System.—EDWARD C. SEGUIN, M. D., Professor of Diseases of the Nervous System in the College of Physicians and Surgeons, New York.

Diseases of Women and Children.—FRANK P. FOSTER, M. D., Gynecologist to the New York Hospital Out-door Department.

General Surgery.—EDWARD J. BIRMINGHAM, M. D., Surgeon to Bellevue Hospital Out-door Department.

Genito-Urinary Diseases and Syphilis.—ROBERT W. TAYLOR, M. D., Professor of Dermatology in the University of Vermont.

Ophthalmology and Oatology.—S. B. ST. JOHN, M. D., Assistant Surgeon to the New York Eye and Ear Infirmary.

Orthopedic Surgery.—NEWTON M. SHAFFER, M. D., Surgeon to the New York Orthopedic Dispensary and Hospital.

Practical Medicine.—E. DARWIN HUDSON, JR., M. D., Professor of Practice of Medicine, Woman's Medical College, New York.

ARSENICAL ATMOSPHERE AND THE ARSENICAL HOT SPRING OF POZZUOLI (NEAR NAPLES), IN THE CURE OF CONSUMPTIVES.

BY

DR. HORATIO R. STORER (*London Lancet*, Sept. 29th, 1877).

THE writer for four years has investigated the relative curative value of the various health resorts of Central and Southern Europe. Pozzuoli, a short distance from Naples, is well sheltered, with a southern exposure. The atmosphere of the place is charged with sulphurous and arsenical exhalations from the adjacent semi-extinct

crater known as the Solfatara, and the springs from the sides of the crater respond definitely to Marsh's test for arsenic. The Italian physicians, at Naples, had long claimed positive curative results from the arsenic in air and water, and Dr. Storer cites repeated cases, carefully watched, which confirm him in the same view. An English hotel for invalids is now established at Pozzuoli, and the council of the Hospital for Incurables, at Naples, has ordered the building of a branch hospital within the crater.

E. D. H., JR.

SALICYLATE OF SODA IN ACUTE RHEUMATISM AND OTHER FEBRILE DISEASES.

OETTINGER (*Wiener Med. Presse*, 1877, No. 34) has employed salicylate of soda in 38 cases, viz.: suberculosis, 3; intermittent fever, 2; typhus, 2; pneumonia, 1; facial erysipelas, 1; rheumatism, 29. The amount given ranged from 90 to 150 grains per day. Almost always after the absorption of from 30 to 45 grains, there was redness of the face, mental excitement, followed usually by profuse sweating, buzzing in the ears, fulness, deafness and heaviness of the head. He had no case of extreme depression, and a less and briefer nausea than when using salicylic acid. Reduced temperature followed sweating, but he often secured the former without the sweating. The temperature was often reduced below the normal. He could detect the salicylate of soda in the urine, by perchloride of iron, three days after its absorption.

E. D. H., JR.

PATHOGENESIS OF XANTHOMA, OR YELLOW PATCHES OF THE SKIN.

BY
M. POTAIN, at Hopital Necker (*Gazette des Hopitaux*, 11th Oct., 1877).

WITH several clinical illustrative cases, and as the result of long and careful observations of cases of xanthoma and cases of jaundice, with the associated symptoms antecedent, during and subsequent to the pigmentism of the skin, the author concludes that, in all the cases of xanthoma, the liver is at fault, though bile is not necessarily the element which penetrates the skin. "Many cases are developed without the existence of jaundice. But the liver not only excretes bile, it has also an important function in haematosis, contributing in a degree to the oxydation of the blood globules." M. Potain believes that all these cases of yellow cutaneous patches coexist with inactivity of the liver, and they become points of deposit of incompletely oxydized fatty matter. A further cutaneous manifestation, even more usual, is pruritus; although present in xanthoma, and intense in jaundice, it often long precedes them, or exists alone. D. H. E., JR.

CEPHALIC THERMOMETRY.

PROFESSOR P. BROCA, of Paris, read, on August 30th, at the last meeting of the French Association for the Advancement of Science, at Havre, a remarkable paper upon this subject. He reported experiments made by means of six thermometers: three applied symmetrically on the two sides of the head, one on the forehead, a second over the ear, and a third on the occipital region. The six thermometers were held in a sort of belt, which served to hold them in place, and to protect them from the external air. The belt was applied twenty minutes for each observation. A first series of observations were made to determine the normal average temperature of the six spots selected. The maximum "cerebral" temperature was found to be 34° 85 C.; the minimum 32° 80 C., and the mean 33° 82 C. The left side of the head, during inaction, was always warmer than the right, by 1° C. on the average. During mental activity the heat became equal on both sides. As regards the comparative heat of the three spots on each side, the frontal spot had an average temperature of 35° 28 C.; the temporal spot of 33° 72 C., and the occipital of 33° 92 C. Intellectual labor caused an increase of nearly 1° C.

In two cases of embolism of the left sylvian artery (right hemiplegia and aphasia) the left side of the head was warmer (according to rule) than the right, except in the temporal region, where there was a difference of .5° C. in favor of the right side. (*Progrès Médical*, No. 36, 1877.) [These researches are very suggestive, and it is to be hoped that they will be prosecuted by observers in this country with instruments like Broca's, or with Seguin's thermoscope or surface thermometer, or with Lombard's most delicate thermo-electric instrument. We understand that the last-named instrument is in use in this city, and we hope that those employing it will soon favor us with a report as to its practical value.

E. C. S.

INDEX TO VOLUME II.

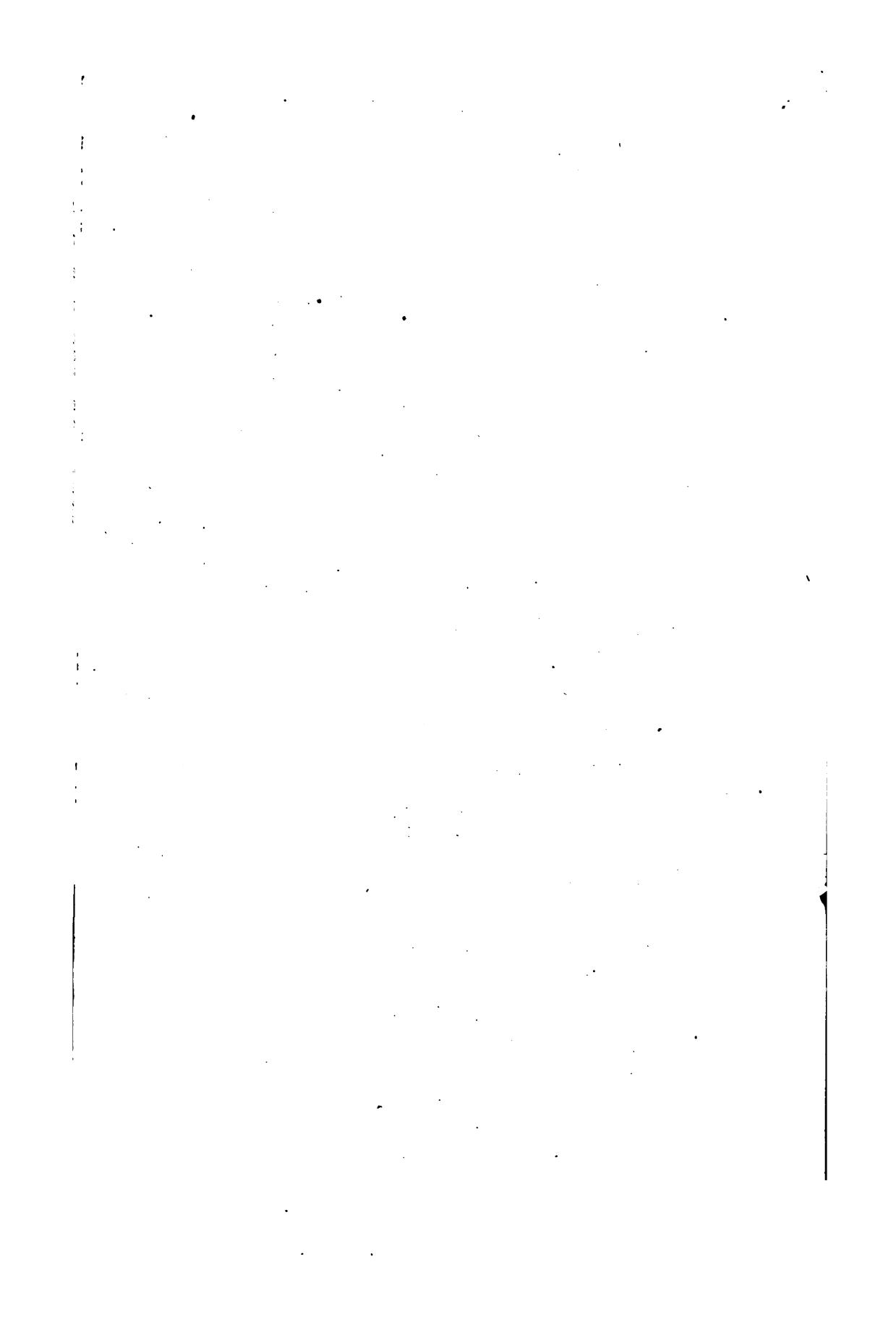
PAGE.	PAGE.		
Abdominal tumors, diagnosis of, by Wm. Pepper	329	Arsenical atmosphere, etc., in phthisis	835
Abscess, iliac, treated antisep- tically	155	Arthritis, fungoid, prophylaxis of	145
Acne	109	ASHBY, T. A., drainage-tubes in surgery	185
Alopecia areata	241	Report from University Hospital	197
Anæmia, progressive pernicious, cured by arsenic	270	Atrophy, muscular, in joint disease, by N. M. Shaffer . .	81
ANDREWS, E., simplification of orthopedic apparatus	1	Auditory canal, obstruction of external, by C. J. Blake .	93
Anus, prolapse of,	214		
Arm and forearm, injuries of, by J. S. Wight	306		

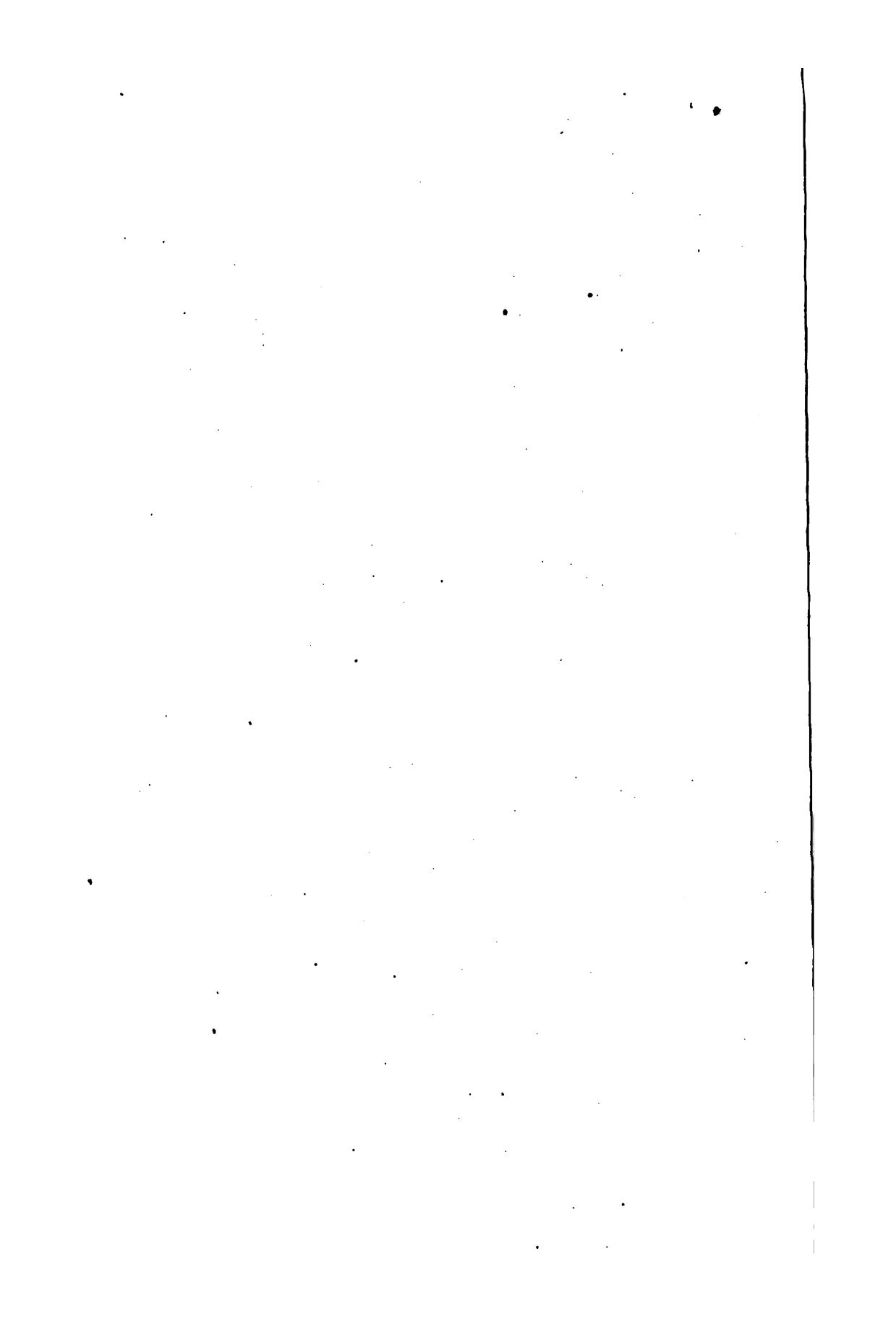
PAGE.	PAGE.		
BERRY, W. B., report from Roosevelt Hospital, New York .	212	DELAFIELD and STILLMAN, manual of physical diagnosis .	296
BLAKE, C. J., obstruction of external auditory canal .	93	Delirium tremens in surgical cases .	112
Boils, sulphide of calcium in the treatment of, by T. C. Smith .	12	Drainage-tubes in surgery, by T. A. Ashby .	185
Breast, four amputations of, by D. W. Cheever .	123	DUHRING's atlas of skin diseases, part ii .	160
Bromidrosis pedum .	110	— treatise on skin diseases .	78
BROWN on the ophthalmoscope .	118	DUNGLISON, R. J., practitioners' reference-book .	224
BROWN-SEQUARD, C. E., paralysis and convulsions .	276-297	DWIGHT on the anatomy of the head .	79
BURNETT, C. H., on the ear .	247	Dysentery, chronic, with abscess of liver .	333
BURGE, J. H. H., recto and vesico-vaginal fistula .	18	Elephantiasis arabum of lower extremities, by M. Corchado .	132
BYFORD, W. H., fibrous tumor of uterus expelled by ergot .	64	Empyema, remarks on, by R. Reyburn .	207
Calculus of urethra .	39	Endocardial vegetations .	217
Calculus, salivary, by R. Tauszky .	67	Erysipelas .	109
Cancer cutis of the neck, by J. S. Thebaud .	312	ESMARCH's bandage, evil results of, by J. B. Roberts .	176
Caries of cervical and upper dorsal regions, treatment of, by plaster of Paris; by C. P. Putnam .	97	ESMARCH's bandage producing fatal cellulitis, by Stephen Smith .	70
Carotid, ligature of primitive, by D. W. Cheever .	126	Estris hominis, by J. S. Thebaud .	312
Gartilages, excision of epiphysial .	142	EVETZKY E., report from Roosevelt Hospital, New York .	333
Cerebral localizations .	315	Exsection of knee joint .	72
Chancres, indurated, occurring twice, by J. S. Thebaud .	312	Eye transfixed by a pin .	198
CHEEVER, D. W., surgical cases .	121	Femur, fractures of, by F. H. Hamilton .	281
Cirsocele, excision of veins for, by J. S. Thebaud .	287	Femur, supra-pubic, dislocation of .	38
CLARK, A., fibrous tumor of pylorus .	204	Fistula, recto and vesico-vaginal, by J. H. H. Burge .	13
Convulsions and paralysis, by C. E. Brown-Sequard .	276-297	— urinary .	25
Copaiba as a diuretic .	295	— vesico-vaginal .	26
CORCHADO, M., elephantiasis arabum of lower extremities .	132	FOSTER, F. P., report in diseases of women .	25
COWLING, R. O., iodide of potassium in irreducible hernia .	139	— vaginal injections .	238
Coxalgia in the Berck Hospital .	141	Genu-valgum, operation for .	318
CRANE, J. J., report from Roosevelt Hospital .	154	— , operative treatment of .	218
CROSBY, A. B., a lost art in surgery .	41	— , osteotomy in .	146
Crystalline lens, splinter of wood on .	199	— , treatment of .	144
Cysts, suppurating dermoid of, pelvic cavity .	33	GOSSELIN, L., dressings for wounds .	16-99-189
		Gynecological transactions for	118

PAGE.	PAGE.		
Hand, phlegmonous inflammation of	262	Loomis, A. L., chronic malarial poisoning	229
HAMILTON, F. H., fractures of the femur	281	Malarial poisoning, chronic, by A. L. Loomis	229
Hernia, iodide of potassium in irreducible, by R. O. Cowling	139	Mammitis, by A. Jacobi	255
Herniotomy, by D. W. Cheever	128	Maxilla, removal of, superior, by D. W. Cheever	130
Hernia, ventral	238	McCLELLAND's surgical jurisprudence	200
—three cases of excision of, by D. W. Cheever	125	McGRAW, T. A., tubercular dropsy simulating ovarian tumor	136
Hip, automatic method of reducing luxations of	269	Meningitis, syphilitic, by E. G. Janeway	252
HUBER, F., report from Colored Hospital, New York	238	Metatarso-phalangeal articulation, resection of	244
Humerus, subcutaneous division of, surgical, neck of	147	Mitral stenosis and pregnancy	317
Hymen, imperforate, by J. S. Thebaud	312	Molluscum contagiosum	242
JACOBI, A., lecture on mammitis, and on catarrhal pneumonia	255	Naevi, tattooing of	110
JANEWAY, E. G., syphilitic meningitis	252	Odontoid process, fracture of	116
Joint disease, muscular contraction and atrophy in, by N. M. Shaffer	81	Opium as a stimulant, by W. H. Thomson	202
Joints, extensibility of	141	Orthopedic apparatus, simplification of, by E. Andrews	1
Joints, muscular atrophy in affections of	242	Osteoclast, a new	147
Knee-joint, indications for drainage of	317	Osteo-sarcoma of ilium removed by galvano-cautery	75
Knee-joint, treatment of inflammation of	148	Osteotomy, subcutaneous	146
Knee-joint, tumor in	113	Ovarian tumors, anatomy and diagnosis of	221
KNIGHT, C. H., report from New York Hospital	37	—dropsy	31
Labia minora, hypertrophy of	154	—tumor simulated by tubercular dropsy, by T. A. McGraw	136
Laceration of face and skull, by D. W. Cheever	131	Ovariotomy, or spaying	32
Lead poisoning	316	—vaginal	32
LEWIS, MAURICE J., report from Albany Hospital	113	Paralysis and convulsions, by C. E. Brown-Sequard	276-297
Lichen ruber, by James C. White	250	Penis, epithelioma of	197
Lipoma of foot, antiseptic treatment	158	Penis, two amputations of, by D. W. Cheever	124
Lithotomy	266	PEPPER, WM., lecture on albuminoid degeneration of the liver, and on abdominal tumors	329
—Median	37	Pericarditis, with effusion, observation on	219
Liver, abscess of, and chronic dysentery	333	Perineum, rupture of	25
Albuminoid, degeneration of, by Wm. Pepper	329	Perspiration in skin diseases	270

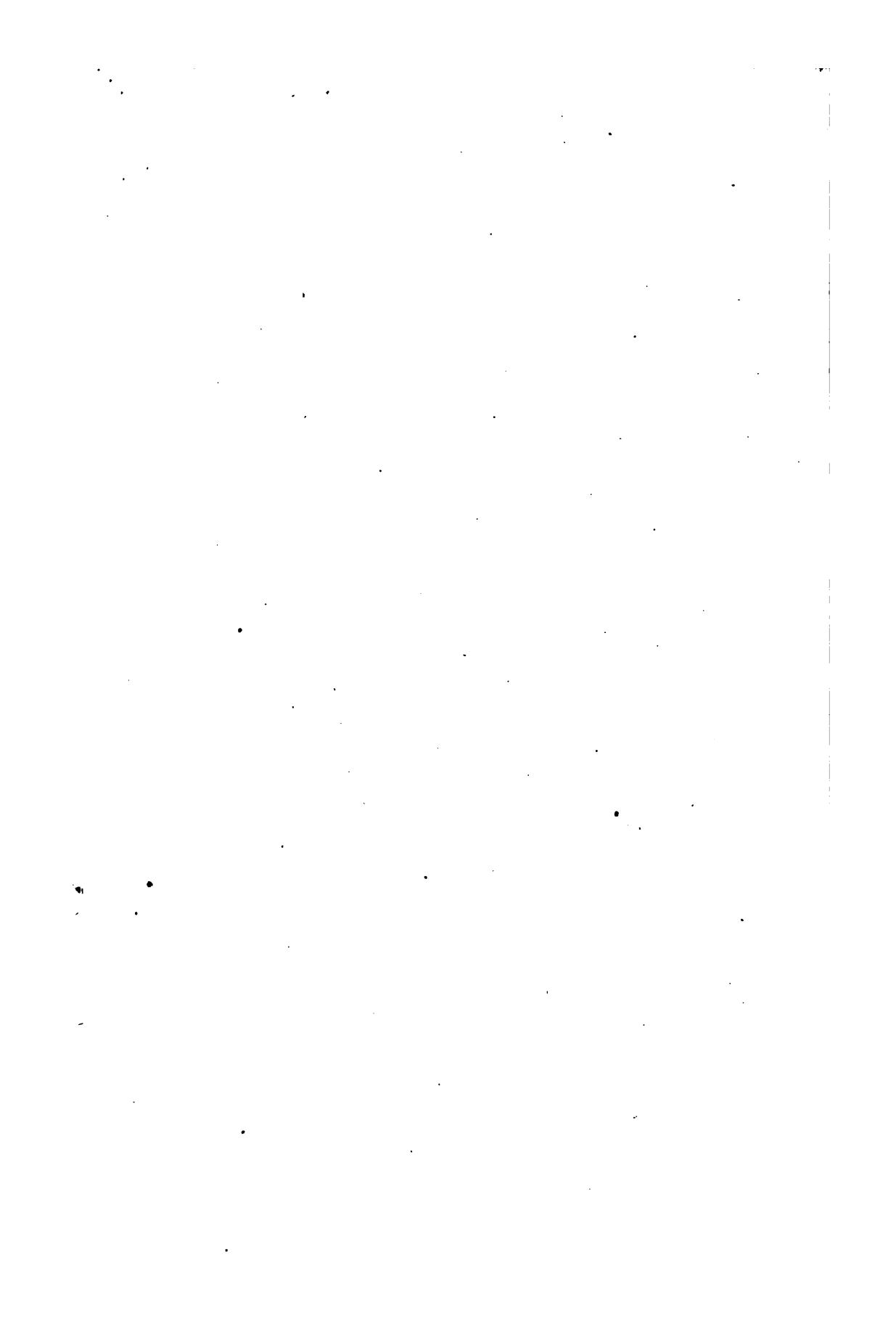
INDEX.

	PAGE.		PAGE.
Plaster, a new adhesive	248	Thigh, four cases of amputation of, by D. W. Cheever	121
Pneumonia, catarrhal, by A. Jacobi	255	THOMAS, T. G., clinical remarks on vaginismus	227
Pruritus	107	THOMSON, W. H., on opium as a stimulant	202
— cutaneus, by R. W. Taylor	161	Thumb, supernumerary, by J. S. Thebaud	287
Psoriasis, treatment of	108-109	Tibia, inflammation of, by D. W. Cheever	129
— treated by chrysophanic acid	293	Tongue, epithelioma of	156
— treated with phosphorus	294	Trichophytosis	106
PUTNAM, C. P., plaster of Paris in caries of cervical and upper dorsal regions	97	Twiss, G. E., report from Roosevelt Hospital	72
Pylorus, fibrous tumor of, by A. Clark	204	Ulcers, scrofulous	108
Ranhes, medicinal	241	Ulna, dislocation forward of lower end of, by R. F. Weir	10
REXBURN, R., remarks on empyema	207	Urethra, rupture of	212
ROBERTS, J. B., evil results of Esmarch's bandage	176	Urticaria	108
— report from Pennsylvania Hospital	112	Uterus, amputation of cervix	28
Salicylate of soda in febrile diseases	158	— amputation of neck of	115
Salicylic acid, therapeutic effects of	216	— cancer of	224
Scabies	106	— case of non-irritable	33
Scalp, epithelioma of	158	— fibroid tumor of	197
SCHAFFER's practical histology	80	— fibrous tumor of, expelled by ergot, by W. H. Byford	64
Scrotum, wound of, followed by gangrene	215	— glandular polypi of neck of	115
Selaceous tumors	109	— removal of intra-uterine musculo-fibrous tumor	31
SHAFFER, N. M., on reflex muscular contraction and atrophy in joint disease	81	— removal of fibrous tumor from	29
— report in orthopedic surgery	141	Vaginal injections, by F. P. Foster	232
Shoulder, amputation at, by D. W. Cheever	123	Vaginismus, by T. G. Thomas	227
SMITH, STEPHEN, fatal cellulitis following Esmarch's bandage	70	VANDERPOEL, S. O., Jr., report from Bellevue Hospital	116
— T. C., treatment of boils by sulphide of calcium	12	WEIR, R. F., dislocation forward of lower end of ulna	10
Spine, angular curvature, treated by a gutta percha mould	220	WENDELL, A. G., report from St. Vincent's Hospital, New York	215-266
Surgery, a lost art in, by A. B. Crosby	41	WHEELER, C. G., modern organic chemistry	272
TAYLOR, R. W., pruritus cutaneus	161	WHITE, JAMES C., case of lichen ruber	259
TAUSZKY, R., salivary calculus	67	WIGHT, J. S., injuries of the arm and forearm	306
THEBAUD, J. S., cases from notebook of	287-312	Wounds, dressings for, by L. Gosselin	16-99-189
Thermometry, cephalic	337	Xanthoma, pathogenesis of, by M. Potain.	336

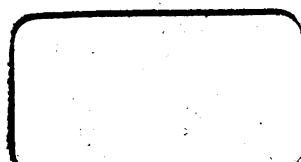








NB 817





3 2044 103 041 885